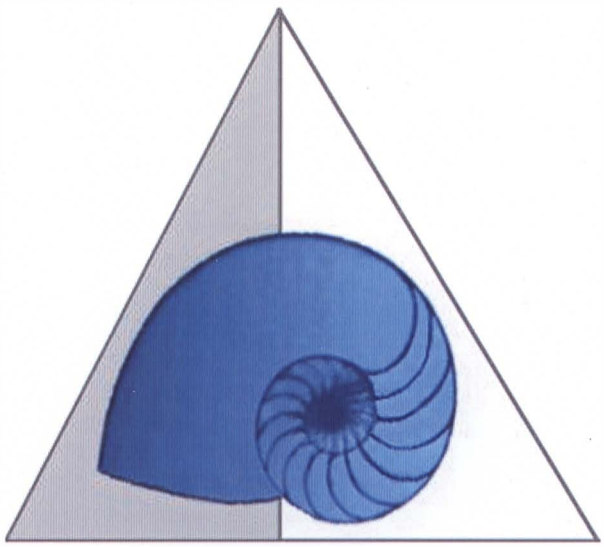
# Kane Trading on:

## Advanced Fibonacci Trading Concepts



## by Jim Kane

Tips, ideas and techniques for market traders

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# Kane Trading on:
# Advanced Fibonacci Trading Concepts

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By Jim Kane

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Kane Trading on: Advanced Fibonacci Trading Concepts

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# Acknowledgements

In my evolution as a trader I've read more material than I can even recall. The majority of this material has contributed very little to my knowledge base. That lack of value, for me, in the material, in and of itself, is important information. It's shown me, by a process of elimination, the things that don't help me, and I can use that information when formulating a trading plan.

In developing material related to Fibonacci trading, two sources have been of great help. I would like to acknowledge these sources, and recommend that readers look into their materials. See if they might be of as much help to your own trading, as they were to mine.

I'd like to acknowledge Scott Carney over at Harmonic Trader. Scott's book, The Harmonic Trader, and the material on his website (www.HarmonicTrader.com), opened my eyes to another way to view the markets. This was my first substantial introduction to the concepts of Fibonacci and harmonics in trading the markets. Scott has quite extensive information on harmonic patterns on his website and has developed several patterns of his own. Scott and I have since spent endless hours discussing harmonics and the markets. His historical knowledge of the markets is extraordinary and has contributed greatly to my own knowledge base.

I'd also like to acknowledge Robert Miner at Dynamic Traders Group, Inc. (www.DynamicTraders.com). Robert's book, Dynamic Trading™, was my next serious excursion into Fibonaccis and trading. This book is extensive beyond belief. There is so much material in Dynamic Trading™ that I would have to consider it must reading for anyone interested in increasing their knowledge of Fibonacci in trading and in Elliot wave analysis. Robert's use of the time factor is also extensive and will open one's eyes to factors outside of just price. Robert also has Dynamic Trader software available, which I use for creating charts labeled with various Fibonacci, harmonic and time factors. It is the software that I used to create the charts for this book. I would like to extend an additional thanks and acknowledgement to Robert for allowing me to use these charts in my works. Information on his products is available on his website. I recommend checking it out to see if you feel that it has information that you can use to help your trading. His contributions in the field are practically immeasurable.

# Introduction

It is my goal in this book to present some advanced ideas in the use of Fibonacci numbers for trading the markets. In writing this book I'm assuming the reader is already quite familiar with the basic concepts of Fibonacci numbers and their basic use in trading. I'm also assuming the reader is familiar with general trading fundamentals. I've tried not to make the read too boring by going over the basics to the point that, by the time I get to 'the good stuff', my readers have already left me for more exciting adventures. If you find you need more background information as you read this material, please check out the material I have available at www.KaneTrading.com. I have also posted a list on the site of books that I, myself, have found helpful. There is quite a bit of information that can be found at bookstores and the library on this topic, too. Hopefully, this will be enough to supplement any missing prerequisite knowledge.

Most of the meat of the book will come in the last four chapters. Depending on how much experience and knowledge the reader has with Fibonacci, earlier chapters may or may not be review. If you find the beginning material too basic, feel free to skim over it, or skip to the later chapters. Although I wanted to focus on the advanced concepts, I felt that if I made too many assumptions about the knowledge level of my readers, I might present a work that would be too difficult for a broad audience to follow. Hopefully, I got the balance right, and I think it will be worth it when you get to the final chapters.

Finally, I want to point out that I have purposefully tried not to provide a lot of information on specific entry techniques, nor have I made any mention whatsoever about trade management. I have done this for a few reasons. The first reason is that I intended this to be a book about the Fibonacci techniques themselves, not about specific entry techniques or trade management. You may ask 'Aren't they the same?' and the answer is 'No, not even close'.

The Fibonacci techniques, as I present them, are designed to find areas where you might *consider* taking a trade. If the Fibonacci techniques convince you that this is an area you would, in fact, like to get involved with the market, you would then look for a 'trigger' to actually get you into a

trade. These triggers are a very personal choice for each trader, specific to his or her trading plan. Whatever trigger you use, and whatever stop you place on the trade, will vary immensely from trader to trader, based on many things in your own specific trading plan such as acceptable risk/reward ratios, trading style, capital available for risk, and so on. For this reason, I present the Fibonacci techniques and let the readers decide on their own triggers.

How you manage your trade once you enter it, again, will be based on your own trading plan, and that is unique to every trader. I can't even begin to offer information on trade management in a book dedicated to Fibonacci work, or the reader looking for in-depth Fibonacci concepts will wind up gravely disappointed. I wanted to use the space in this book for what is described in the title, Fibonacci techniques. If I devoted, say, half the space to non-Fibonacci entry and management techniques, I could see many readers being disappointed in how much time was spent 'off topic'. I may write books down the line on specific entry techniques and considerations in their use, and on trade management. I refer the reader to the KaneTrading.com website to check for additional material I have published, both prior to, and following the writing of this book.

What I have tried to do in this work is present some new ideas with Fibonaccis and trading. There is just one main theme in the book: How can I use Fibonaccis to find areas where I might consider taking a trade? I have made a valiant effort to keep the focus directly on developing the material to this end. My goal is to leave the reader self-sufficient in this process by the time they finish this book. Then they can then look at these potential Fibonacci trading areas and make decisions to trade or not to trade, based on their own individual trading plan. If I have succeeded at this, then I have met my own goal.

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# Chapter 1

## Basic Fibonacci Review

In writing this book I assumed that the reader has a fairly good knowledge of the Fibonacci numbers, and of the concepts of using Fibonacci in trading the markets. Nonetheless, I'm going to do a little review here in Chapter 1, just to refresh some of the ideas I'll be building on later with the more advanced concepts. I'll refrain from the detailed derivations of the number series and refer the reader to one of my introductory books on the subject, or to the many library and Internet references on the subject.

The most basic Fibonacci number is denoted as Phi ($\Phi$), the 'Golden Ratio'. It has a rounded value of 1.618. For those that like the mathematics behind this, you can get the exact value from this equation:

$$\Phi = \frac{1+\sqrt{5}}{2}$$

The ratio 1.618:1 is pervasive all throughout the natural world. In studies on beauty performed across many cultures, the closer the different proportions of the face were to this ratio, the higher was the level of perceived beauty. If people are asked "which rectangles are the most pleasing to the eye", the most preferred rectangular shape will have its longer side 1.618 times the length of its shorter side. The examples are endless. For those like myself who never tire of this, there are plenty of books available at the local library, not to mention resources on the Internet.

In my early days of exploring Fibonacci numbers I was also fascinated with pi ($\pi$), the constant determined by dividing the circumference of a circle by its diameter. As we will see in a later chapter, pi can be used as an extreme external retracement for trading purposes. I was constantly thinking that pi and Phi must be related somehow, although I couldn't begin to guess how two irrational numbers such as these could be joined in any kind of formula. Lo and behold, one day I found a reference to a mathematical proof that linked the two together into one complex formula. That was enough to solidify the concept, for me, that there was more going on in nature than meets the undiscerning eye.

Let's look at the most commonly used Fibonacci numbers when it comes to trading. We already have Phi, the 'golden ratio', 1.618. We can derive many, many more numbers directly from this. For example, we can do the reciprocal, that is, flip 1.618 over, and we have .618. The .618 is denoted as phi (φ) with a lower case p in 'phi', as well as with the lower case Greek letter φ. This is, perhaps, the number that is the most well known to the average person. Another example is to take the square roots of these two numbers, producing .786 and 1.272.

These four numbers, .618, .786, 1.272 and 1.618, are the 'basic four', the key numbers that most traders watch. Next, there is a lot of reference in the trading literature to .382. One of the nearly endless numbers of fascinating things about these Fibonacci numbers is how many different ways they can be derived from each other. So how can we get the .382? We can square .618 and we get .382. Or we can subtract .618 from 1 and get .382. There are other ways, but it's suffice to say you can spend many a rainy afternoon just finding new relationships and derivations if you are so inclined.

The last of the common numbers you see being used for trading, or cited in the literature, are .500, 1.000 and 2.000. While none of these are 'true' Fibonacci numbers, they are used extensively in trading. The .500 would be the so-called '50% pullback' or '50% retracement'. The 1.000 would correspond to the 'double top' or 'double bottom'. These numbers will be included in the series I will build upon. In a later chapter I will show that there are actual Fibonacci numbers (i.e. numbers derived directly from Phi) that are very close to these numbers. To the best of my knowledge the introduction of these numbers in the context of trading will be a first.

This leaves the series that we will begin to work with at:

.382, .500, .618, .786, 1.000, 1.272, 1.618, 2.000

While this may seem like a lot of numbers, most modern day charting software allows all these and more to be pre-set, making their use quick and easy.

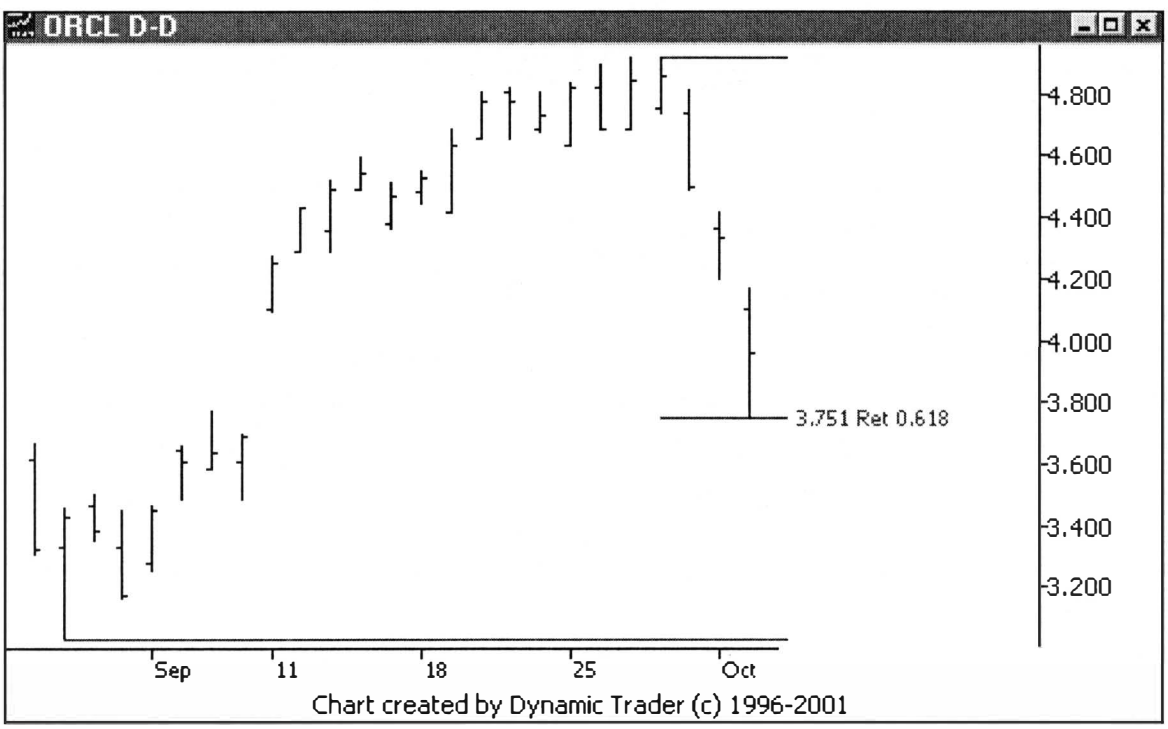
# Chapter 2

## Internal Retracements

In order to make use of the Fibonacci numbers, one first has to understand the concept of a retracement. Let's assume a particular market is in some kind of a trend. For the sake of an example, let's say an uptrend. The expression 'trees don't grow to the sky' applies here, meaning that even if an issue is headed up, it's likely to 'pull back' from time to time on its way up. These pullbacks are what are termed retracements, since some of the move is 'retraced'.

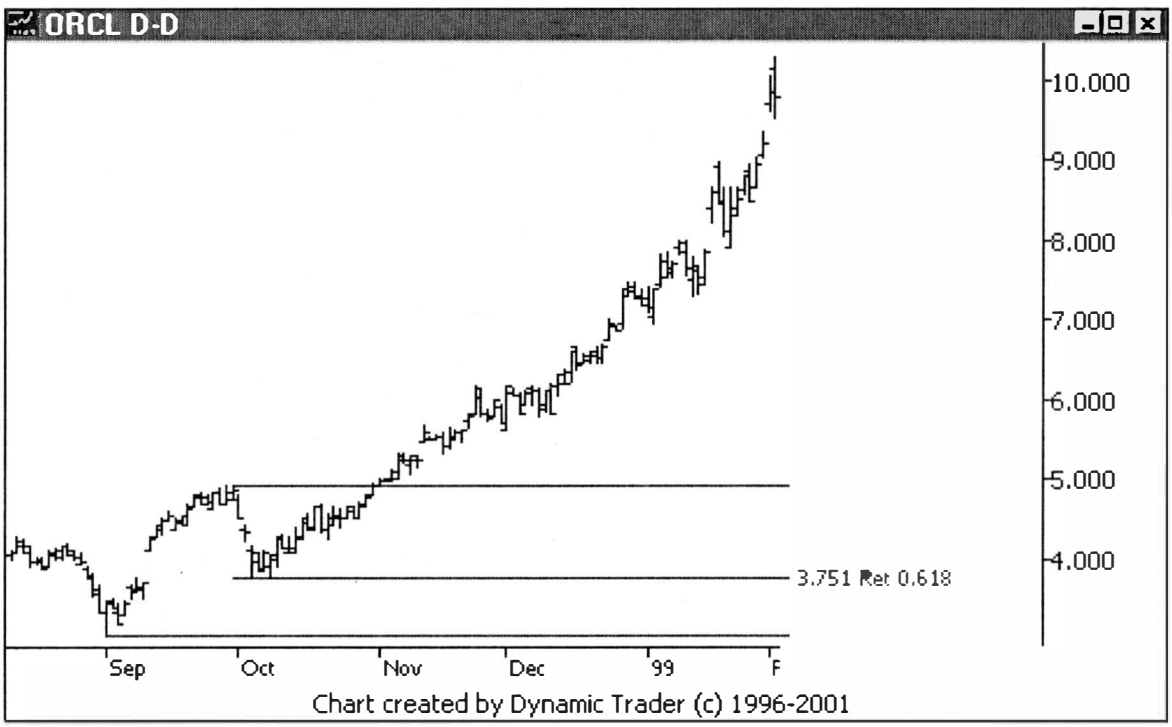
As long as the retracement doesn't go below the starting point of the trend, the assumption is the trend is still intact. A retracement that retraces less than the entire previous trend is further termed an 'internal retracement'. Let's look at an example of an uptrend with an internal retracement. See figure 2.1.

**Figure 2.1**



The basic idea is that once the retracement is done, the trend will resume in its original direction. See figure 2.2, which shows what happened after ORCL retraced to the .618.

**Figure 2.2**




If a retracement ends and the trend resumes, one can say that it was an area of support (in the case of an uptrend), or an area of resistance (in the case of a downtrend). Searching for possible areas of support or resistance is the basis of many trading styles. The most common forms of support and resistance (such as trendlines, both sloping and horizontal) are what might be termed 'static'. Moving averages, old highs and lows, intraday highs and lows, and swing-highs and lows are also frequently used possible areas of support and resistance.

Fibonacci numbers are yet another way of determining what might be good support or resistance areas before the fact. This is very common practice in the currency markets. As more and more people have taken up trading, and computer charting has become commonplace, the use of Fibonaccis has spread to all markets.

It seems to me that as more people started to use these numbers, at first it made them more effective for trading, but then they became almost common knowledge. At that point it seemed like the self-fulfilling prophecy became an issue, and like any technique that everyone watches, it became a part of the market. What I mean is, I started to see stop gunning at the basic Fibonacci areas, issues gravitating towards these numbers, overshooting of the numbers and then reversing and so on. This was telling me a lot of people were starting to watch these areas.

At about the time I started noticing changes in how some issues responded to the basic numbers, I began to experiment and look for new numbers. While I will cover these new numbers I discovered, in detail, in later chapters, I want to point out here that it looked like these new numbers were right at the areas where issues were overshooting the basic numbers. I mention this here because I'm going to conclude this chapter with some additional Fibonacci retracement chart examples, and I want to point out that although you may sometimes see a reversal right at one of these basic numbers, you will also see a lot of overshoots. The examples given here should, therefore, be considered quite 'well-chosen'. See figures 2.3, 2,4 and 2.5.

**Figure 2.3**

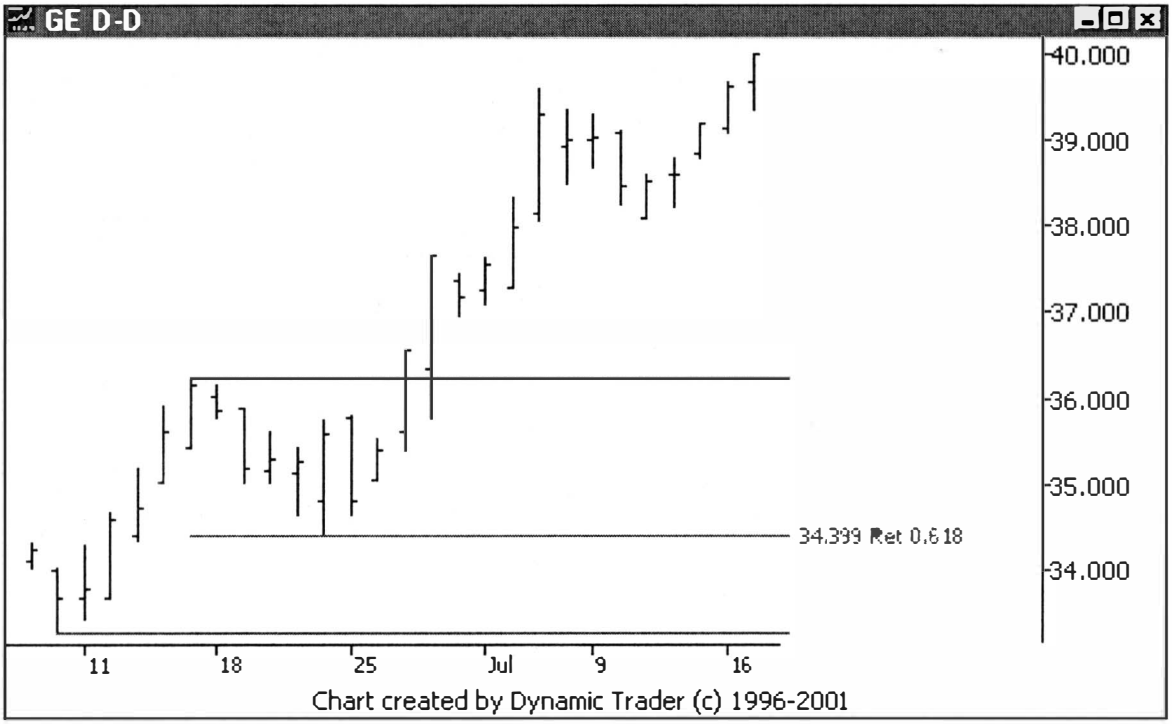
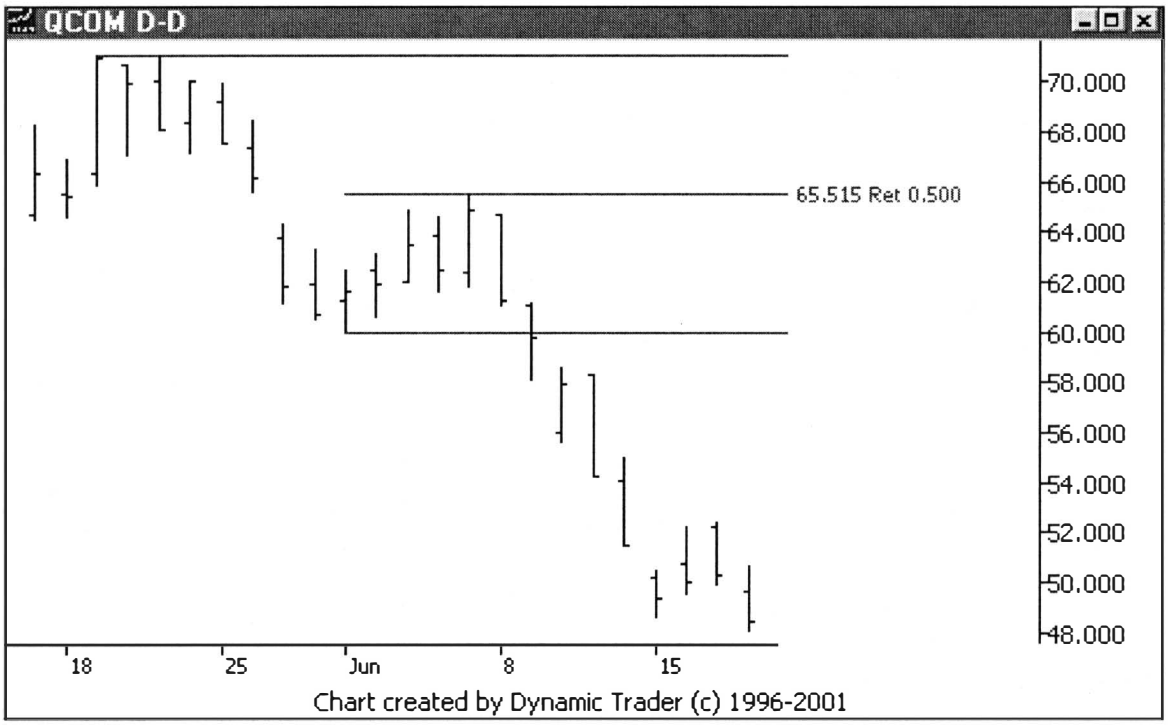



**Figure 2.4**



**Figure 2.5**



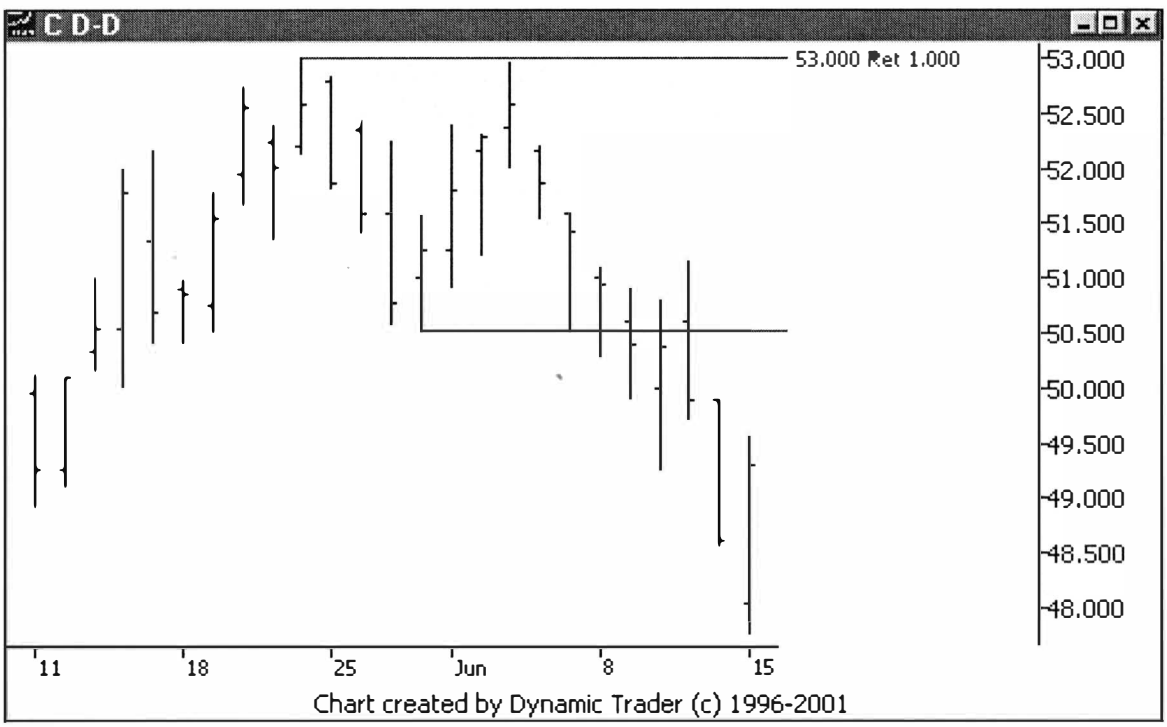

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# Chapter 3

## External Retracements

Sometimes a retracement will continue back to the point where the trend started. If the issue stopped there and then continued back in the direction of the trend, it is what you would call a 'double bottom' or a 'double top'. It could also be called a 1.000 retracement (since 100% of the move has been retraced, or expressed without the percent sign, 1.000). See figure 3.1.

**Figure 3.1**




A retracement can also continue beyond the original starting point of the trend we are looking at. This is sometimes referred to as an 'external retracement'. I like to call these extensions, because they extend beyond what I would normally think of as a retracement, but I've frequently seen that term used elsewhere with several different meanings ascribed to it. For that reason, I'll stick to external retracement. See figures 3.2-3.4.

**Figure 3.2**

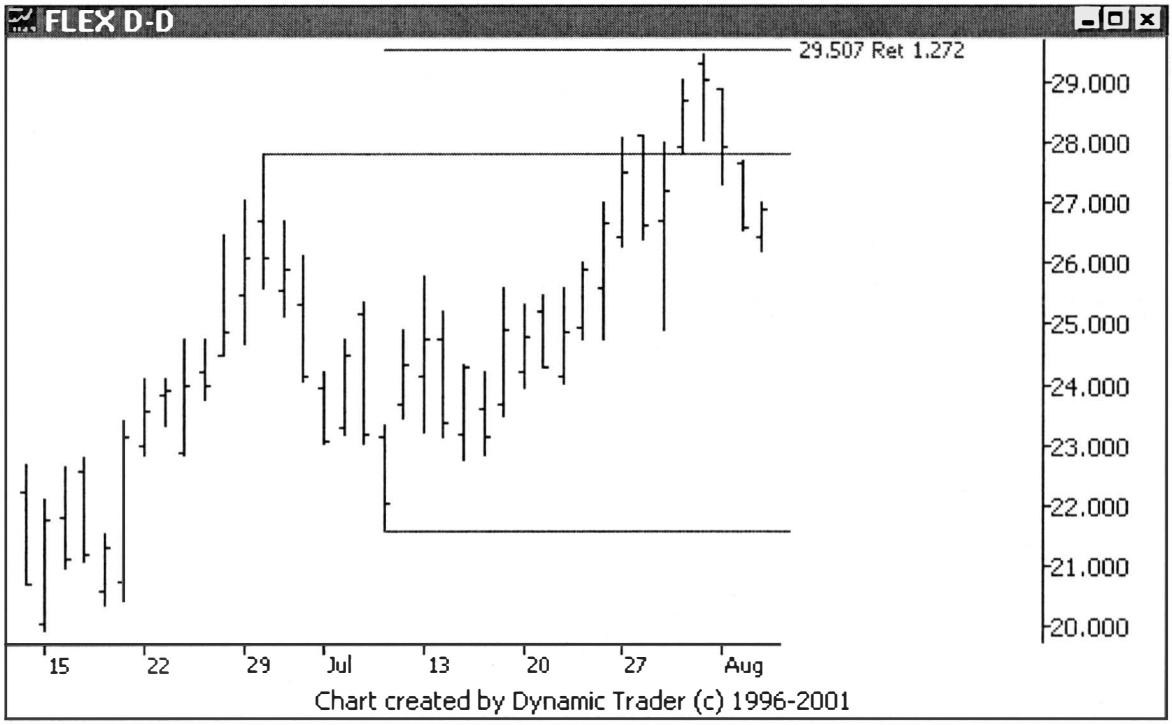



**Figure 3.3**

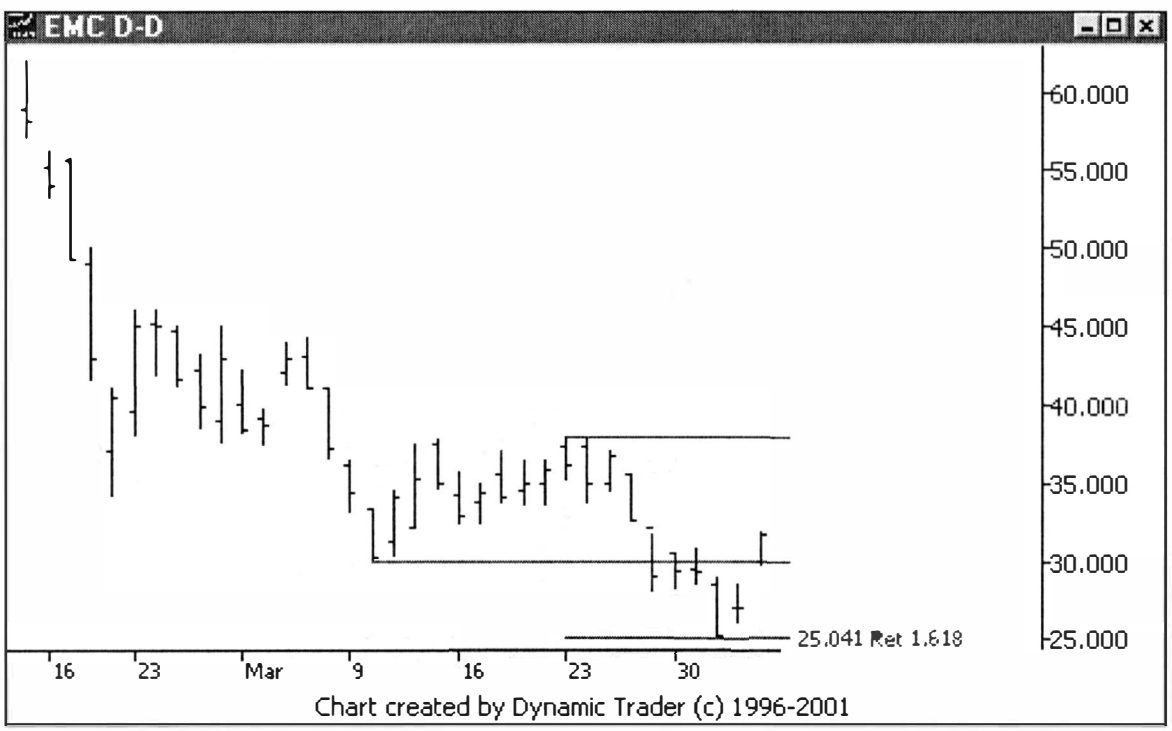
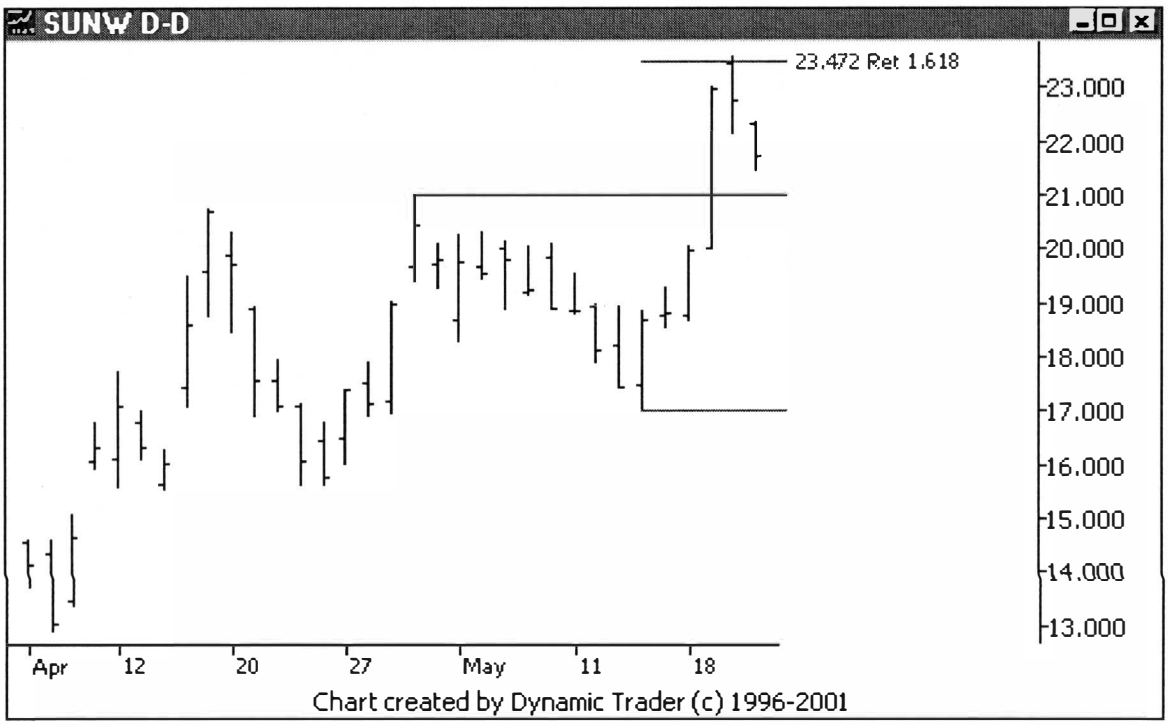


**Figure 3.4**




Although I'm going to leave the trading concepts until later chapters, notice in the following examples how these external retracements point to the end of the immediate move in the trend. I'll show the same three charts we've just looked at in figures 3.2-3.4, extended further ahead in time, to show what actually happened at these Fibonacci points. See figures 3.5-3.7.

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**Figure 3.5**




**Figure 3.6**

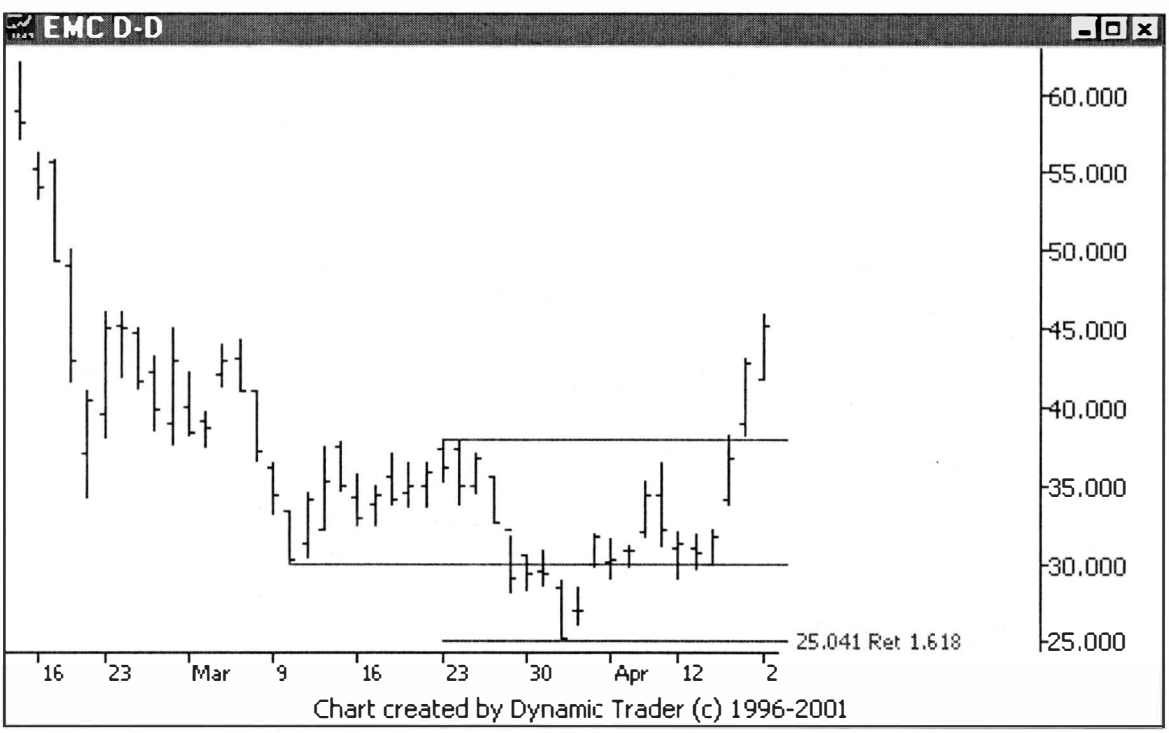
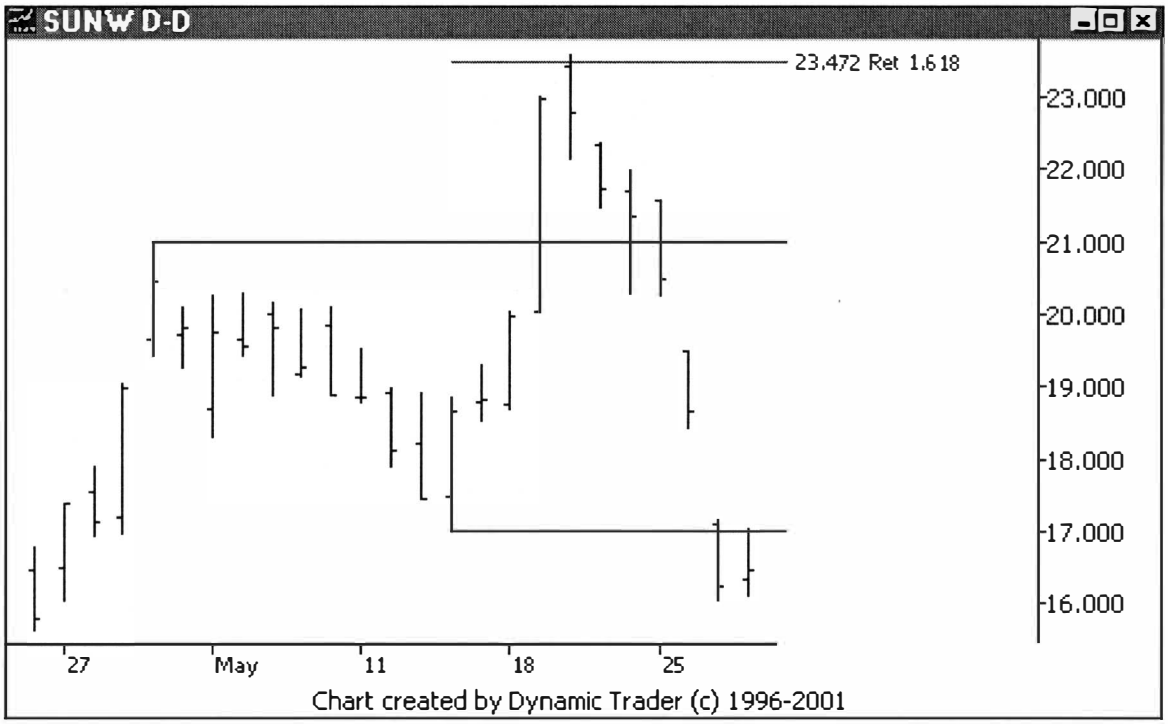
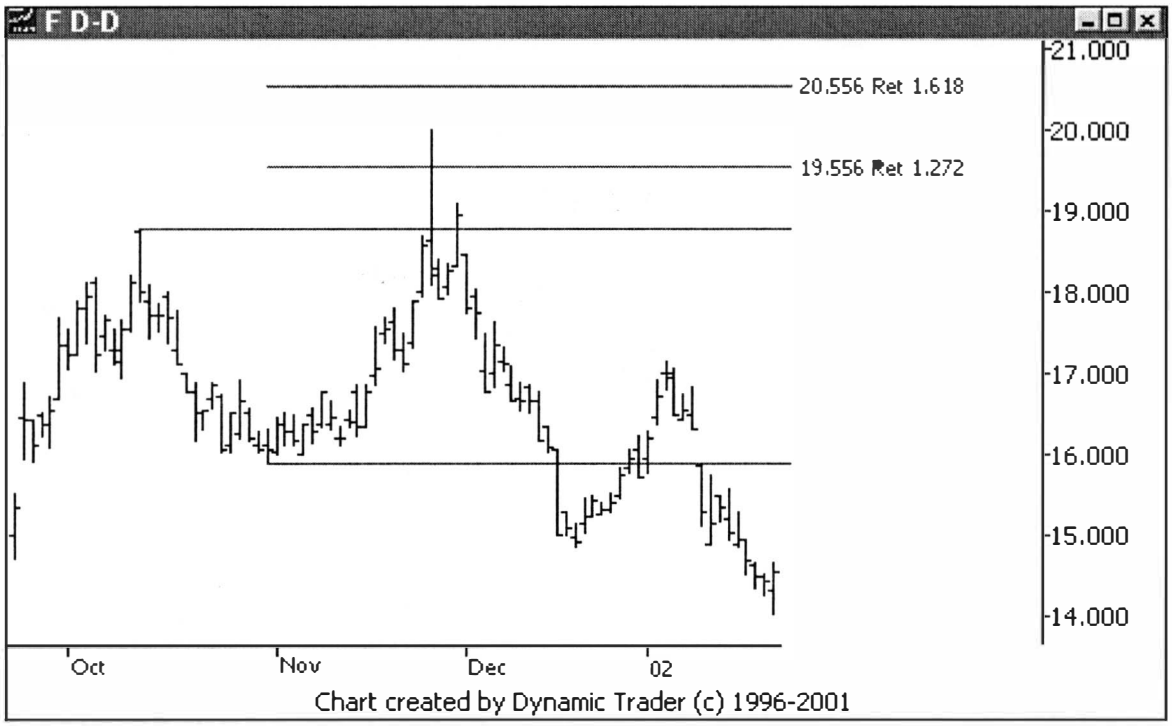


**Figure 3.7**




Many times you'll see the countertrend moves start right in the area of a Fibonacci external retracement. You'll also see that since this has become pretty common knowledge, overshoots seem to be more common than they used to be. You'll also see 'jumping the gun' moves, where the issue almost gets to the external retracement and then everyone 'dogpiles' on it, trying to get in early and off it goes. This leads some to say that the numbers aren't valid because so many times they don't work. I'll conclude this chapter with a 'jumping the gun' example. See figure 3.8.

**Figure 3.8**




Did the issue overshoot the 1.27? Or did it get jumped on early before the 1.618? There's no way to know exactly why an issue turns when it does.

The Fibonaccis give you ideas where things *might* happen. And as we'll see later, what if we have more than one Fibonacci in a given area? Then we have a zone. If we have a lot of Fibonaccis in one area, we have a grouping. We have a possibly significant zone for a trade.

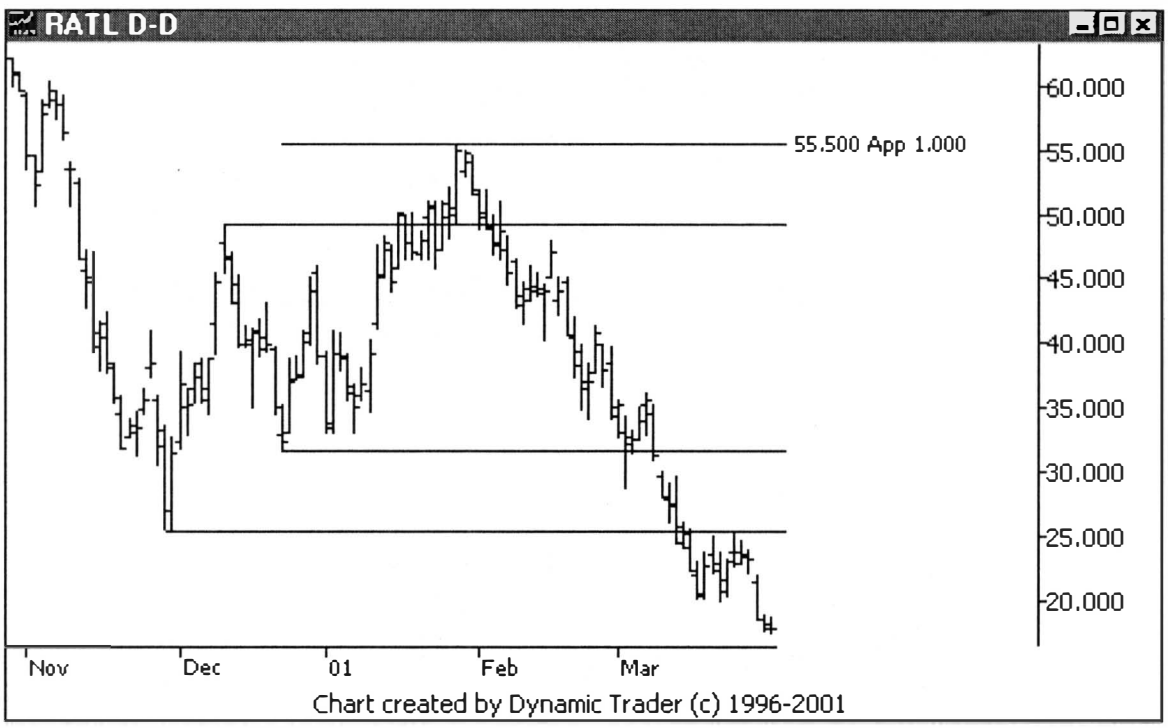
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# Chapter 4

# Projections

When I first began studying Fibonaccis, the concept of a projection took me quite awhile to understand. In some ways this is a variation of a 'measured move'. The idea is that if an issue makes a move and then rests, either by a pullback or some type of consolidation, and then starts to move again, the next move may be proportional to the first move in some way. In Elliot wave theory you have the *'abc'* correction - where you get a move, a pullback and then a move equal to the first. See figure 4.1.

**Figure 4.1**




What I started to notice was, in many of these moves, these zigzag or two-step corrections, the two legs (the *a* and *c* legs in Elliot wave terms) weren't equal. I did find, though, that they were frequently a Fibonacci ratio of each other. See figures 4.2-4.4.

**Figure 4.2**

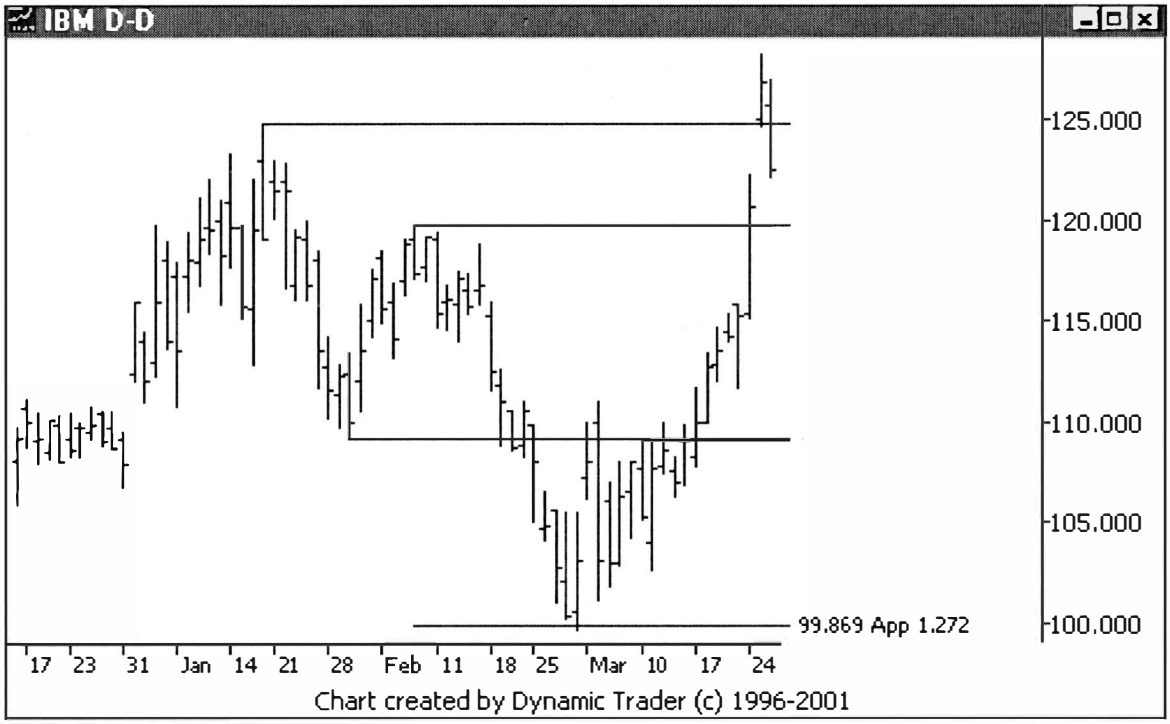



**Figure 4.3**

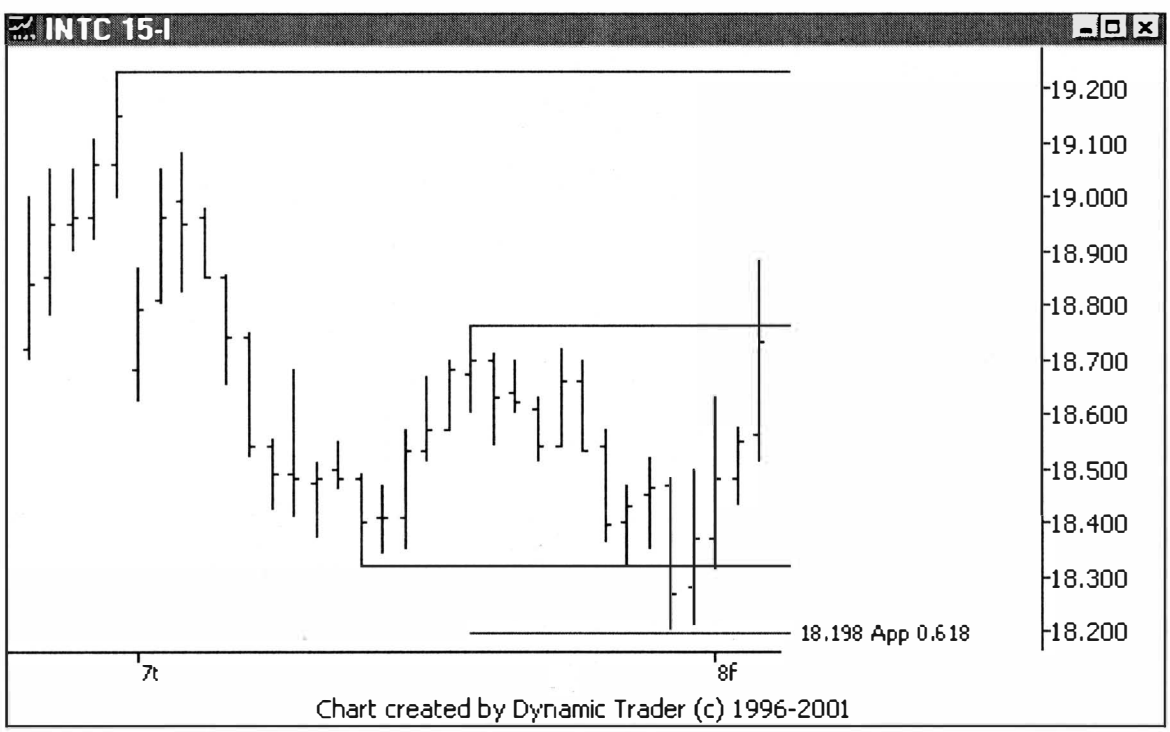
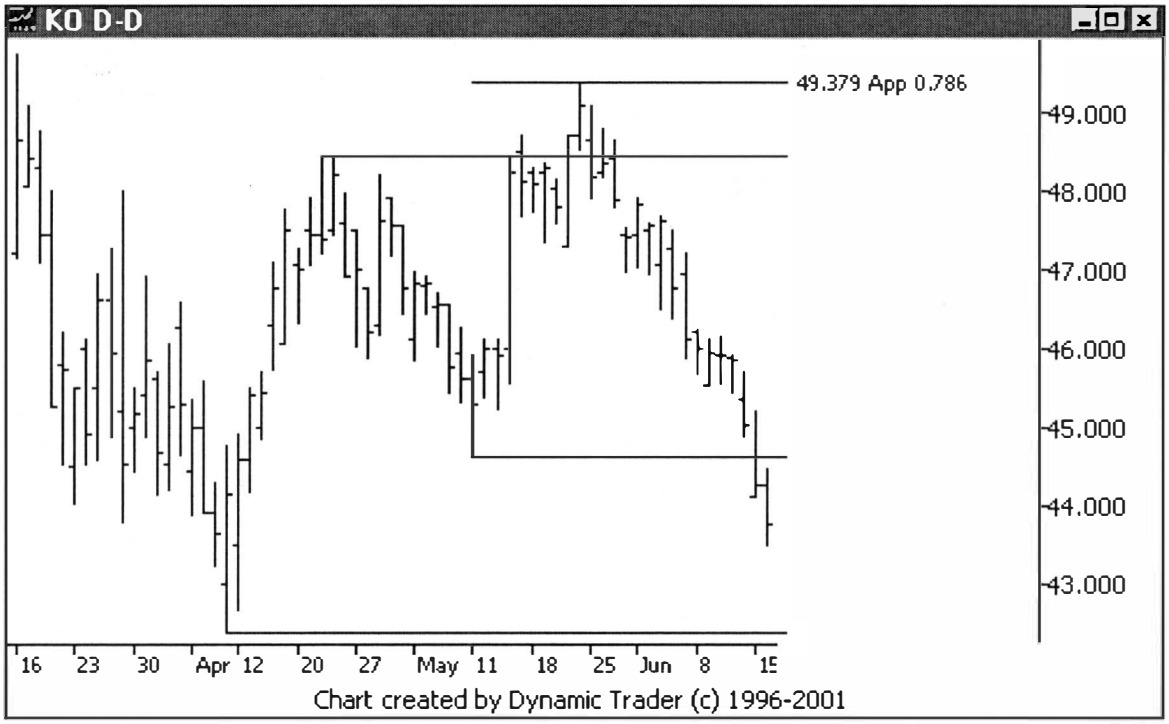


**Figure 4.4**




This gave me more areas to look at when I tried to determine a possible support or resistance zone. Now, is this another example of traders discovering these numbers and jumping the gun, while others try to drive them through the zones to pick off stops? Possibly. For trading, my only concern is *where* the areas are that I want to be looking at, not the *why* behind the moves.

I've found the idea of projections one of the most useful of all the Fibonacci concepts. Generally, I find that in a correction to an existing trend, the move will be close to an *abc*, with the *a* and *c* legs close to equal. The most common projections to look for are .786, 1.000 and 1.272 projections. Once the *c* leg is greater than 1.272 times the length of the *a* leg, I would start thinking this is a new trend, not a correction anymore. In Elliot wave terms we would then be in leg 3. I find these legs to project to 1.618 or 2.0 most commonly. See figures 4.5-4.7.

**Figure 4.5**

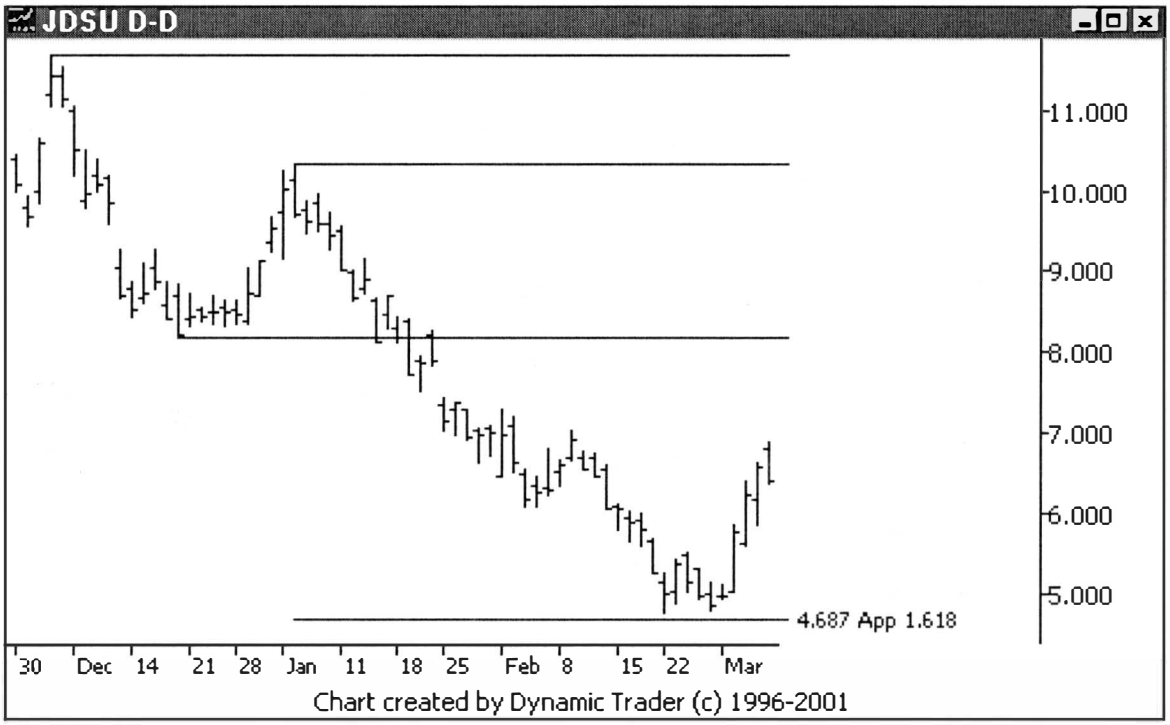



**Figure 4.6**

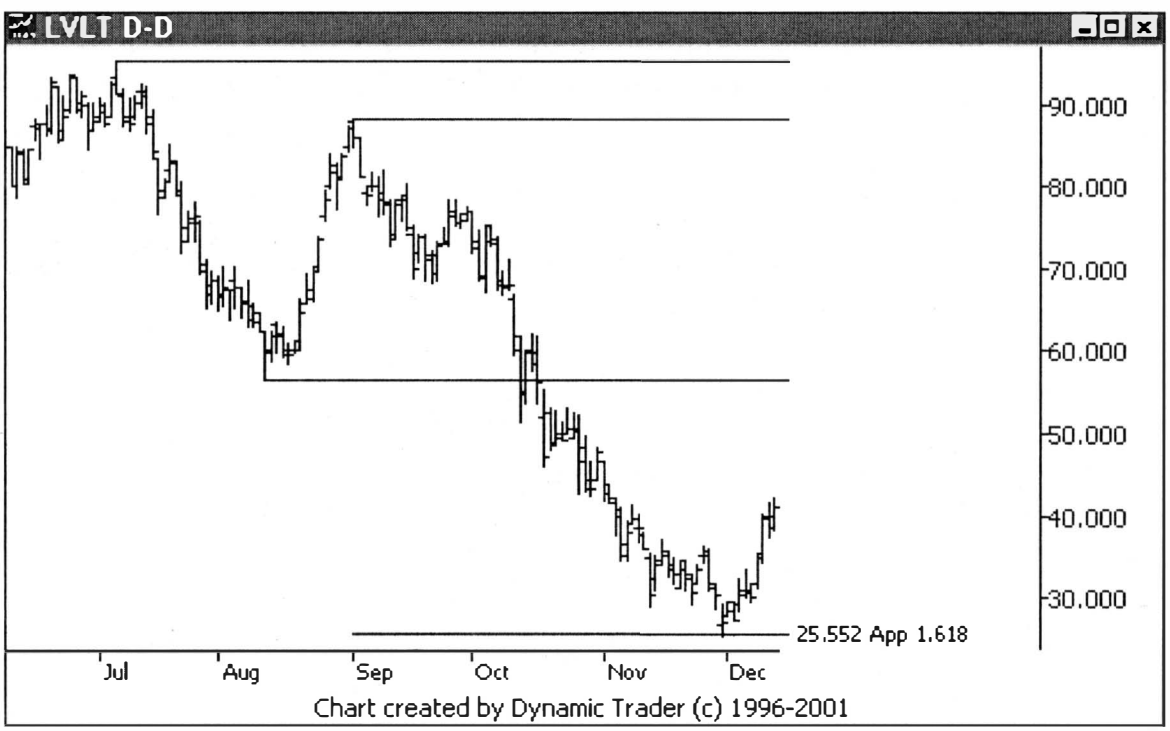
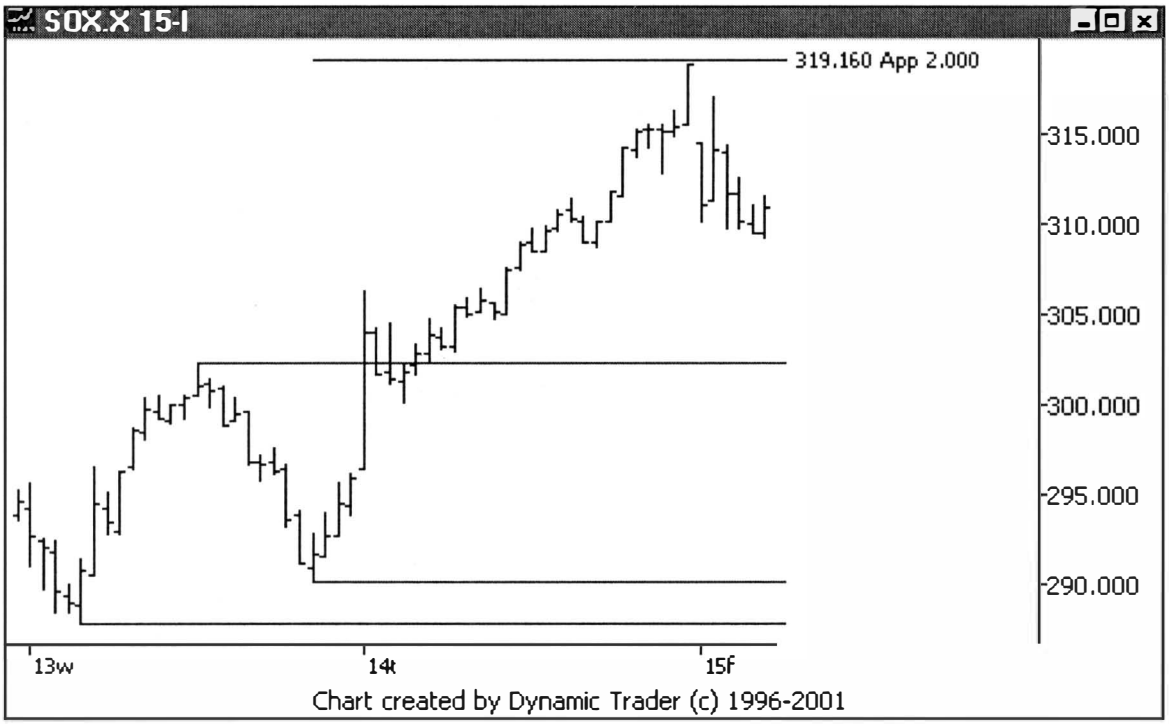


**Figure 4.7**



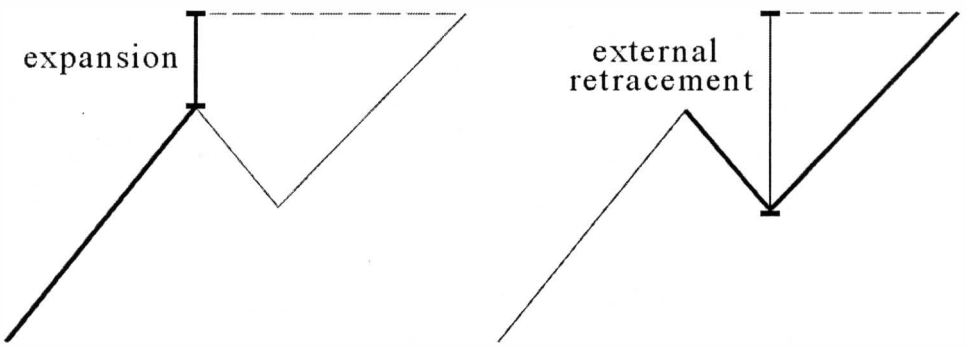

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# Chapter 5

## Expansions

The expansion is the technique I probably use the least, although it may have more promise than I generally have attributed to it. This is an area few traders look at, and as such it may offer the most promise for additional research. The idea is simple enough; you just want to look at how far beyond the last swing-high a move might go. Just like an external retracement carries beyond the previous swing-point high or low, an expansion does, also. It's all a matter of how you measure the move. Let's look at figure 5.1 for a comparison.

**Figure 5.1**




Using an uptrend as an example, the expansion adds a Fibonacci ratio of the trend move on to the top of the swing-high, whereas the external retracement does a Fibonacci ratio (of greater than 1.000, say a 1.272 or 1.618) of the pullback and adds that amount to the point where the pullback terminates. For an expansion in the case of a downtrend, one just 'flips' the procedure over, subtracting the Fibonacci ratio of the trend move from the swing-low. I find these two methods will frequently give you nearly identical areas. See figures 5.2-5.4, with explanations for each chart.

**Figure 5.2**

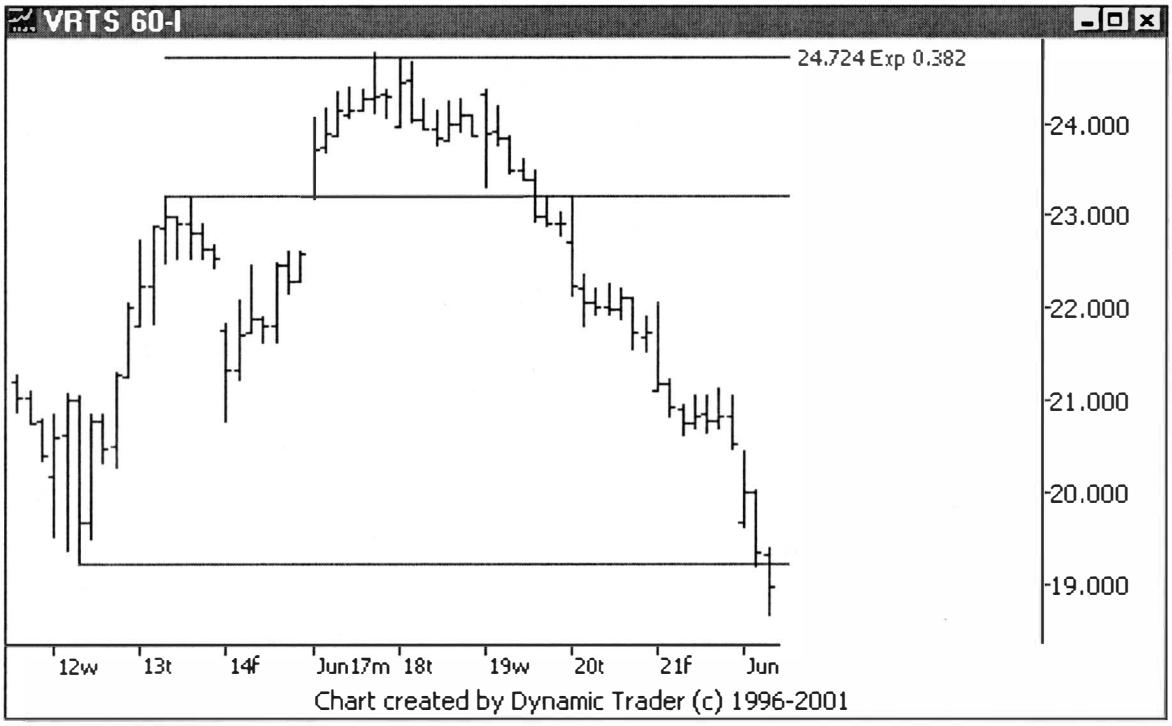



Figure 5.2 shows a .382 expansion. Notice how .382 of the initial move is simply added to the swing-high point. The pullback amount is not used in the calculation.

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**Figure 5.3**

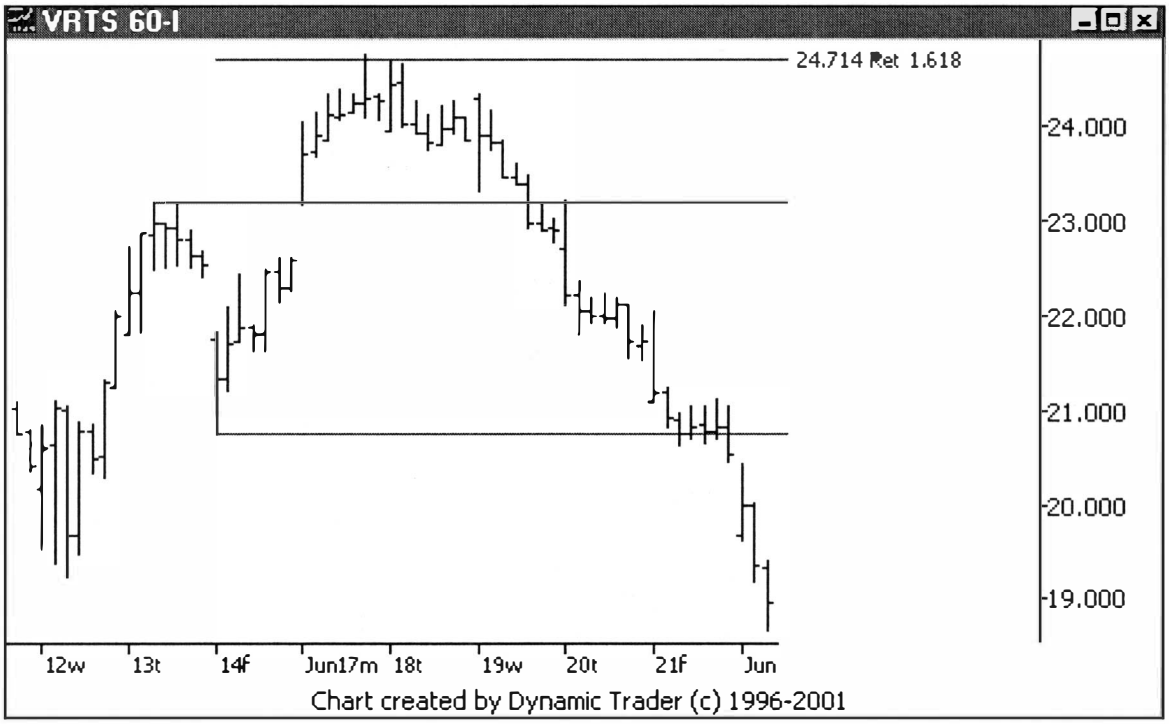



Figure 5.3 is the same chart as figure 5.2, but with the more familiar external retracement, in this case a 1.618. Notice how close the 1.618 retracement price of $24.71 is to the .382 expansion price of $24.72.

**Figure 5.4**

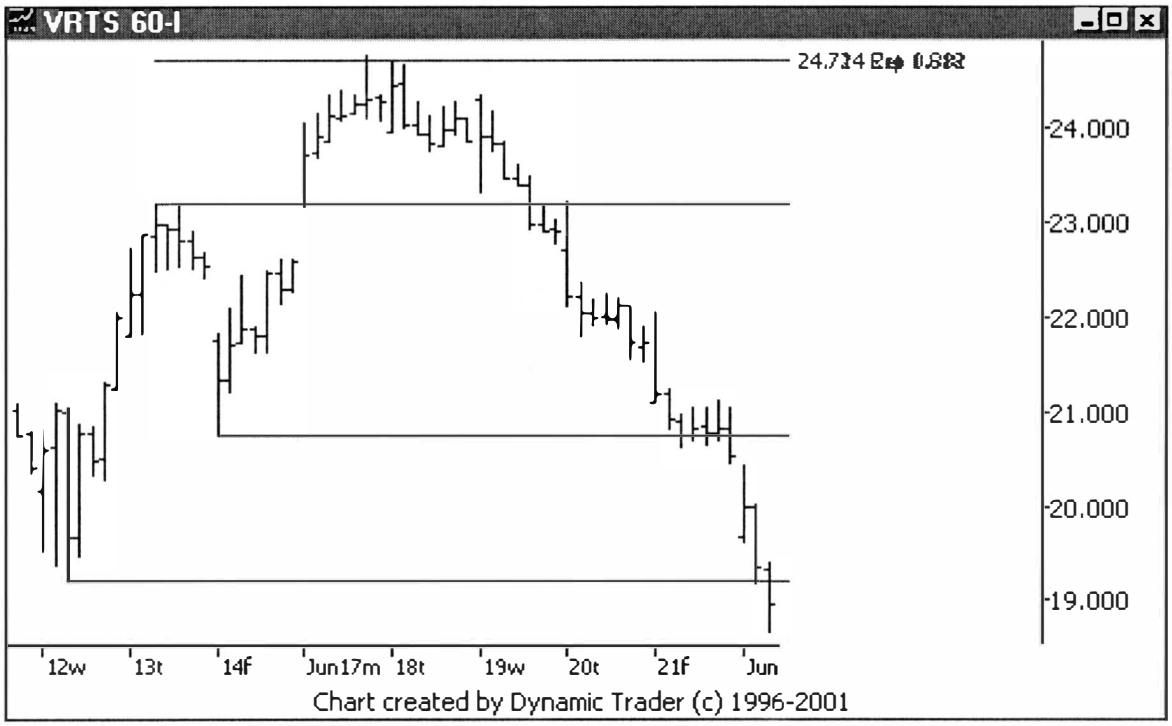



Figure 5.4 shows both the .382 expansion and the 1.618 retracement on the same chart. Although the chart is somewhat unclear because of the close overlap of the two numbers, it is worth presenting an unclear chart here for two reasons. First, to show how close these numbers can actually be at times. Second, when we get to the chapter on groupings we will have to create charts with not just two overlapping prices but sometimes with many. Best not to shy away from it now, with only two numbers overlapping.

Expansions can be used with all variations of Fibonaccis. I'll present two more examples here, a .500 and a .618, but you are by no means limited to these in your studies. See figures 5.5 and 5.6.

**Figure 5.5**

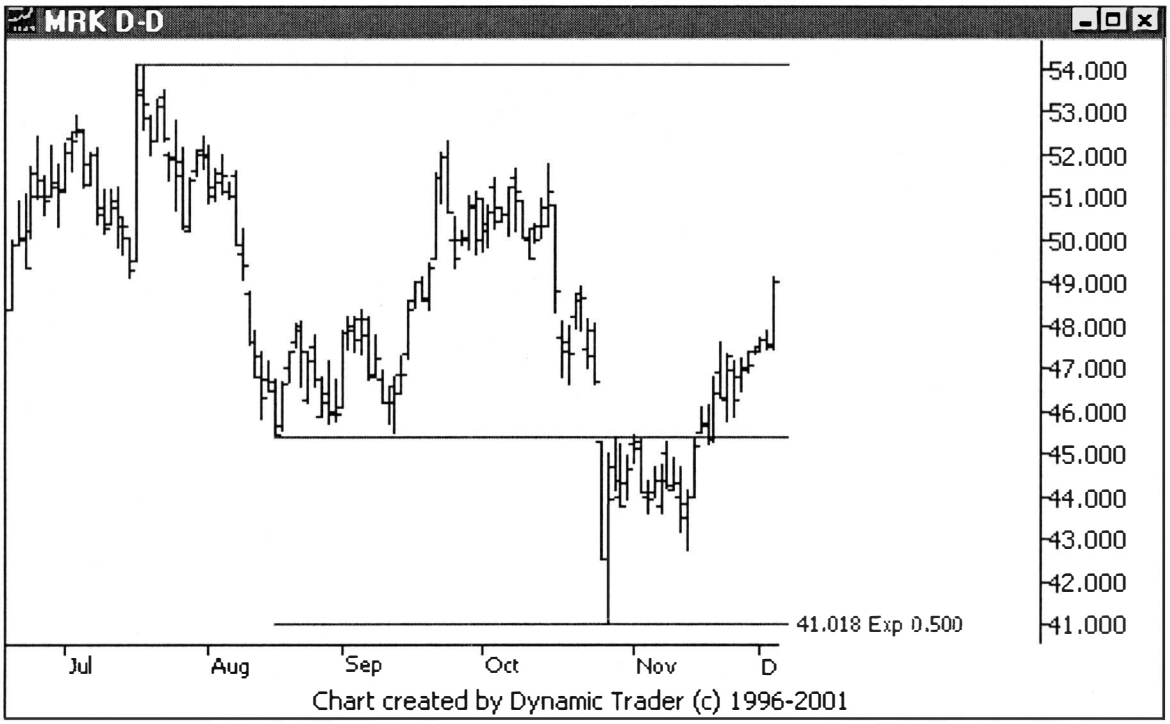
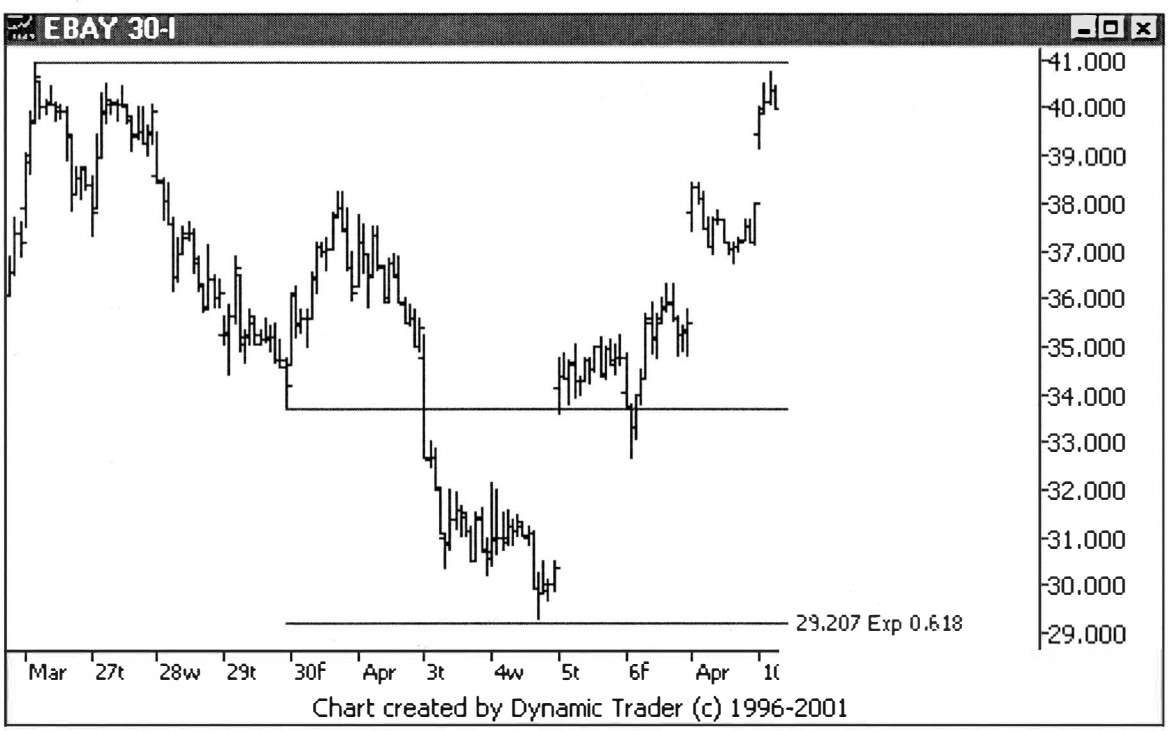



**Figure 5.6**



As traders, you need to decide if you want to add this additional expansion technique to your game plan. When we get to the chapter on groupings I will provide two examples where I use an expansion in the mix. I will provide the two examples to show how expansions can support the other techniques, but otherwise I won't use it in any of the other examples.

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# Chapter 6

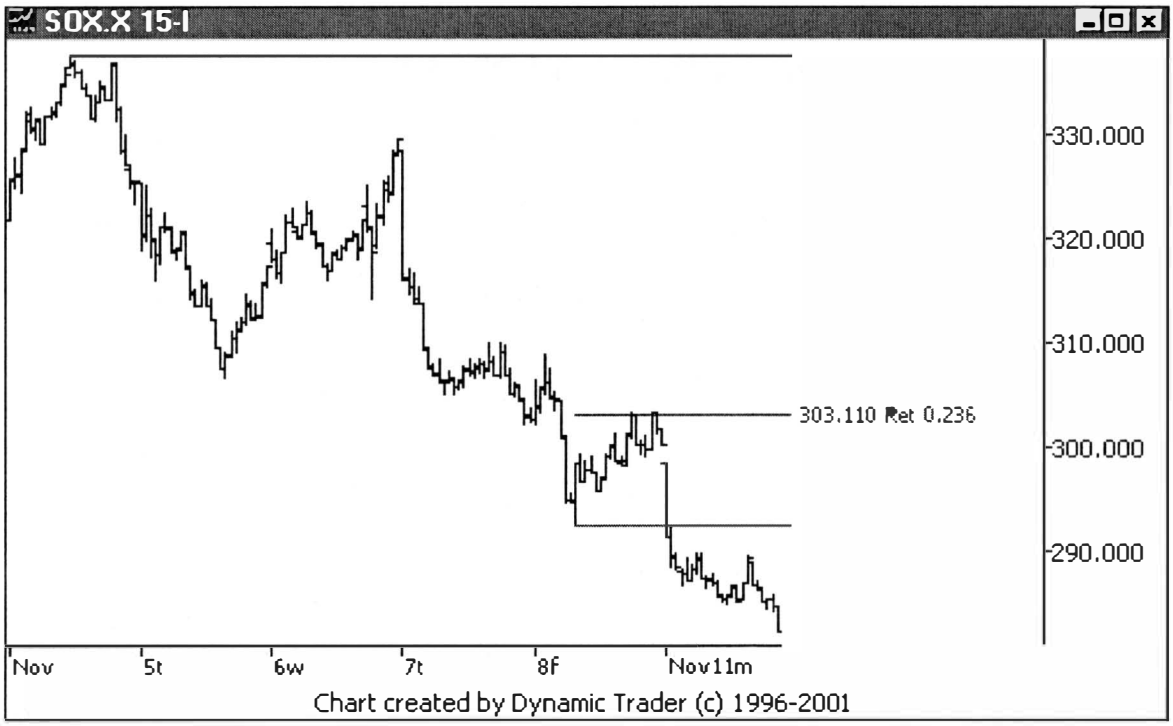
## More Fibonacci Numbers

Most traders stick with the basic Fibonacci series of numbers. It might be argued that adding more numbers to the mix will only serve to make the techniques too complicated, and there is a lot to be said for keeping the game plan simple. On the other hand, a simple plan that everyone else can also see is likely to have some serious noise. By noise I mean you will likely see a lot of price fluctuation in the area of the trigger. I try to strike a balance between just the basics and too much.

First, I'd like to examine two very commonly used 'Fibonacci' numbers, the .500 and the 2.000. As noted before, these aren't 'true' Fibonacci numbers, but are numbers often used in trading plans that use the Fibonaccis. I began to wonder if there were numbers in these areas that could be derived directly from Phi (the Golden ratio), or from phi (the reciprocal of the Golden ratio).

Recall from Chapter 1 that we derived the .382 by squaring the .618. Next, I tried multiplying this .382 (which is .618 times .618) by .618 again. This gave me .236, a number I recognized. In my vast reading on Fibonaccis in trading I had seen the .236 used fairly frequently. See figure 6.1.

**Figure 6.1**




In deriving the .382 and the .236, then, all we are doing is taking additional .618 ratios of the .618 starting point. From here I took the square root of this .236 I had just derived and I got .486.

Now, this was very close to .500 and was derived directly from Phi. For those inclined towards math, this route was essentially $(.618)^{\frac{3}{2}}$, or the square root of .618 cubed. I continued to play on my calculator, looking for other routes to get this same number. As mentioned before, there is usually a multiplicity of ways to get these numbers. They seem to interrelate with each other like some giant web. This added credence, to me, that these numbers weren't just some random creation.

At this point I wondered what the .618 of the .786 would be, so I tried that. Bamm, there's the .486 again. Now I was sure this was very closely tied in with the common Fibonacci numbers. For my purposes, I had my Fibonacci '50% retracement' number.

Next, I wanted the number that would correspond with the 2.000. Since the 2.000 is the reciprocal of the .500, I just flipped the .486 over and got 2.058.

$$\frac{1}{.486} = 2.058$$

I now had the Fibonacci number for the 2.000 external retracement. I would guess more than a few readers are saying, 'But those are so close, what does it matter?'

In actual trading reality, it may not. Or it may be that those trades that overshoot the 2.000 (because of stop gunning, or too many traders piling on, or whatever) may go right to the 2.058. And trades that fall shy of the .500, may be stopping right on the .486. Regardless of whether or not this small amount is truly important, I wanted to work with numbers derived directly from Phi. See figures 6.2 and 6.3.

**Figure 6.2**

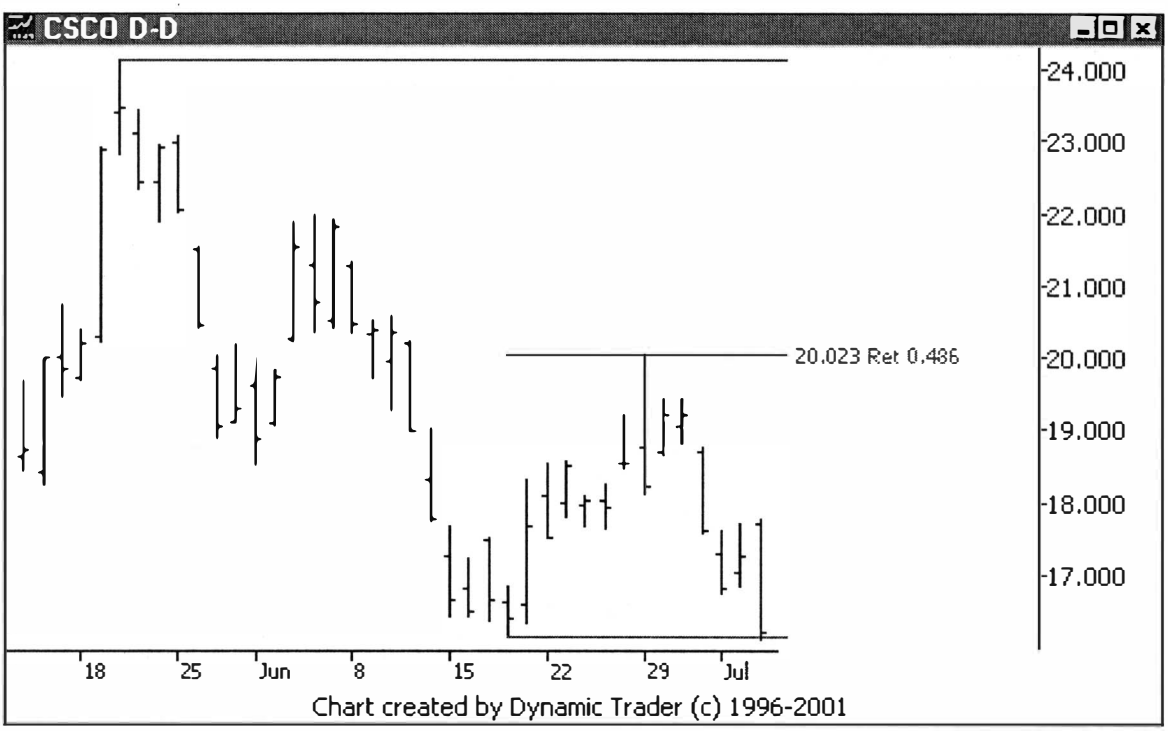
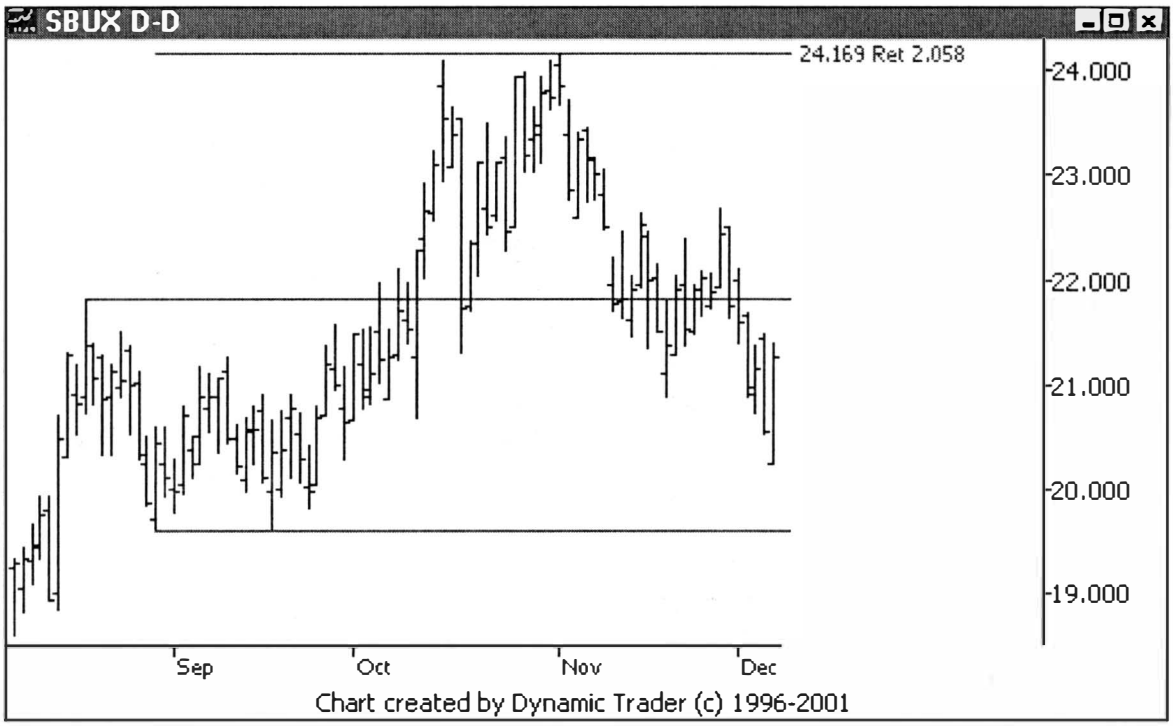


**Figure 6.3**




Notice, in figure 6.3, before we move on, how choppy SBUX trades. It tested the $19.60 retracement area twice before finally going up and testing the $24.17 area, again twice, before finally reversing trend. This could be quite a challenging stock to trade.

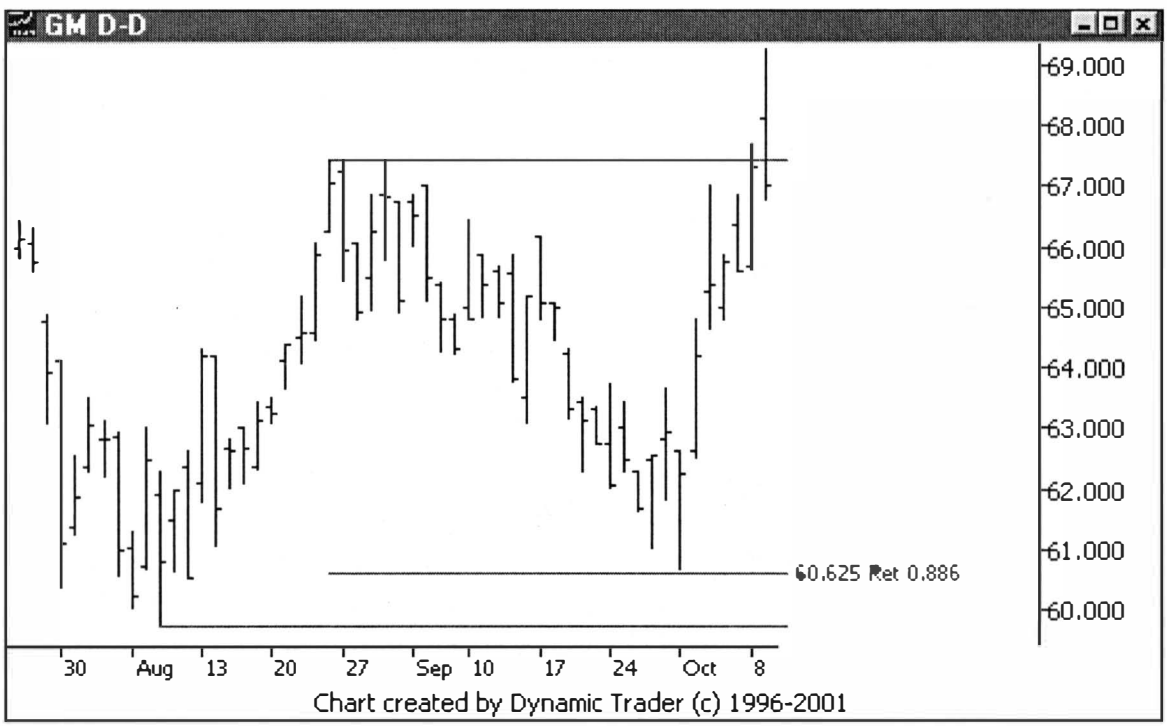
Now, here comes one of my best discoveries. In meetings with Scott Carney over at Harmonic Trader, he was showing me patterns that consistently went through the .786 by a fairly regular amount. We saw this over and over, and I began to wonder if there might not be a Phi derived number in that area. I actually stumbled on it fairly quickly once I began playing with my calculator, something I probably should be embarrassed to admit I do regularly.

I noted to myself that .786 was the square root of .618. So I took the square root of .786. I figured if taking the square root of the .618 was a valid concept, then taking the square root of the .786 (essentially the fourth root of the .618), was just as valid. The number came up, .88665... Technically if you round it up it would be .887. Truncated it was .886, and that was easier

to remember because it 'rhymed' with the familiar .786. Hence the '886' was born.

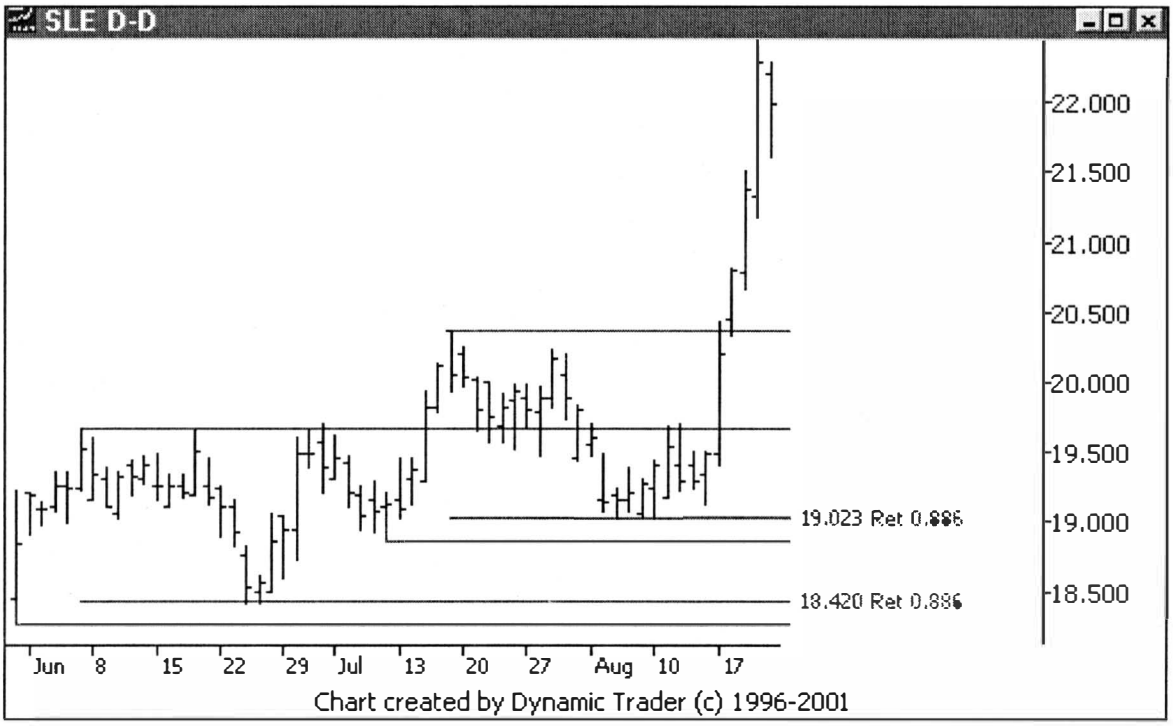
I then went to many of the charts Scott and I had looked at and lo and behold they were stopping on the .886 with near exact precision. I was quite astounded how precise it was. I looked at many more charts and the .886 seemed to be a very significant number. Since I discovered this number Scott has went on to develop a pattern around it and I am working on a pattern where this number is critical. See figures 6.4 and 6.5.

**Figure 6.4**




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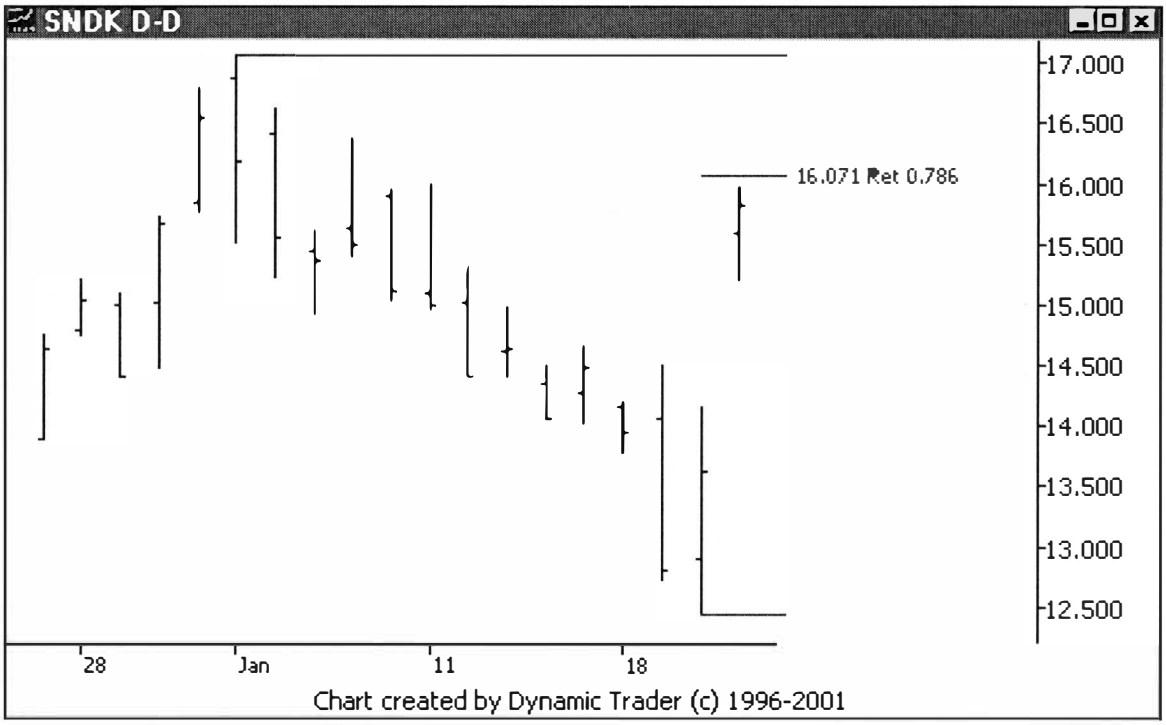
**Figure 6.5**




Hopefully, figure 6.5 is clear enough to follow, as it shows two successive .886 retracements.

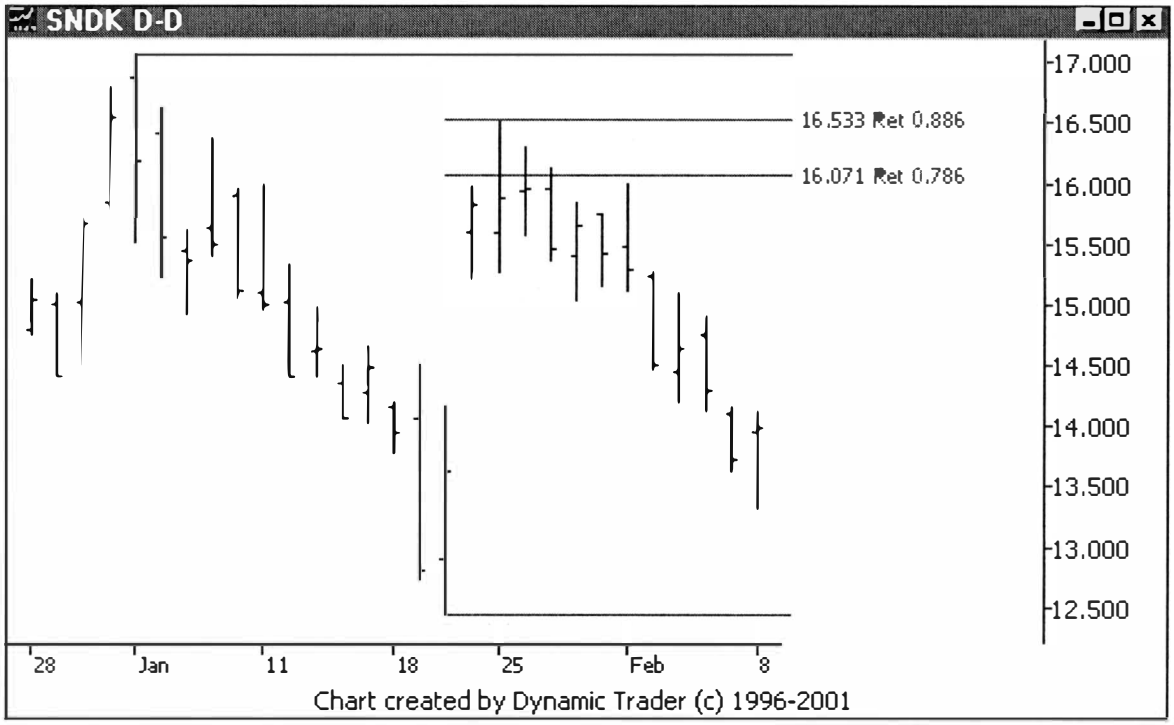
I feel the .886 is the most significant number in my arsenal at this time. This significance may be because it is still a fairly new and unknown number (at least until this book gets out!). Or it may be because the .786 has gotten to be so well known that if the .786 is overshot it will wind up at the .886. I don't know if this is why the .886 seems so significant, nor do I care why it may be. All I care is that, for my own trading purposes, I want to add it to the mix when appropriate. See figures 6.6 and 6.7, with explanations.

**Figure 6.6**




Here we have a strong gap up reversal and we are watching the .786 as a possible stopping point. Let's look at the next chart to see what actually happened.

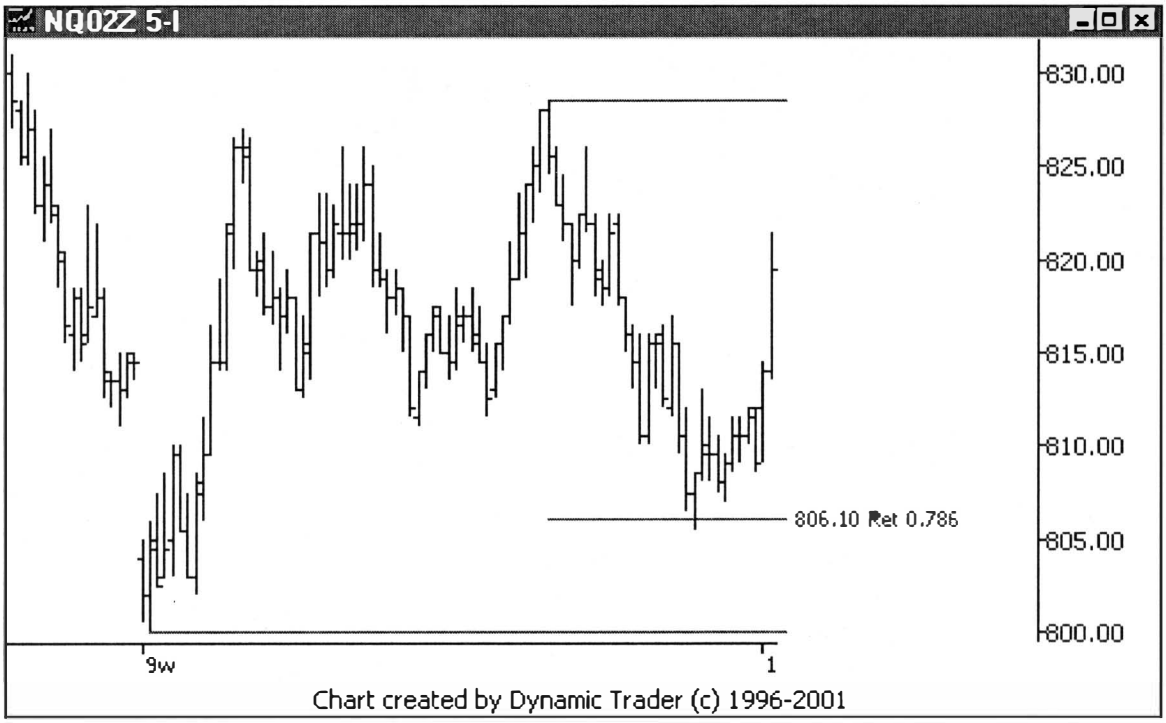
**Figure 6.7**




The issue moved right through the .786 and reversed hard right at the .886.

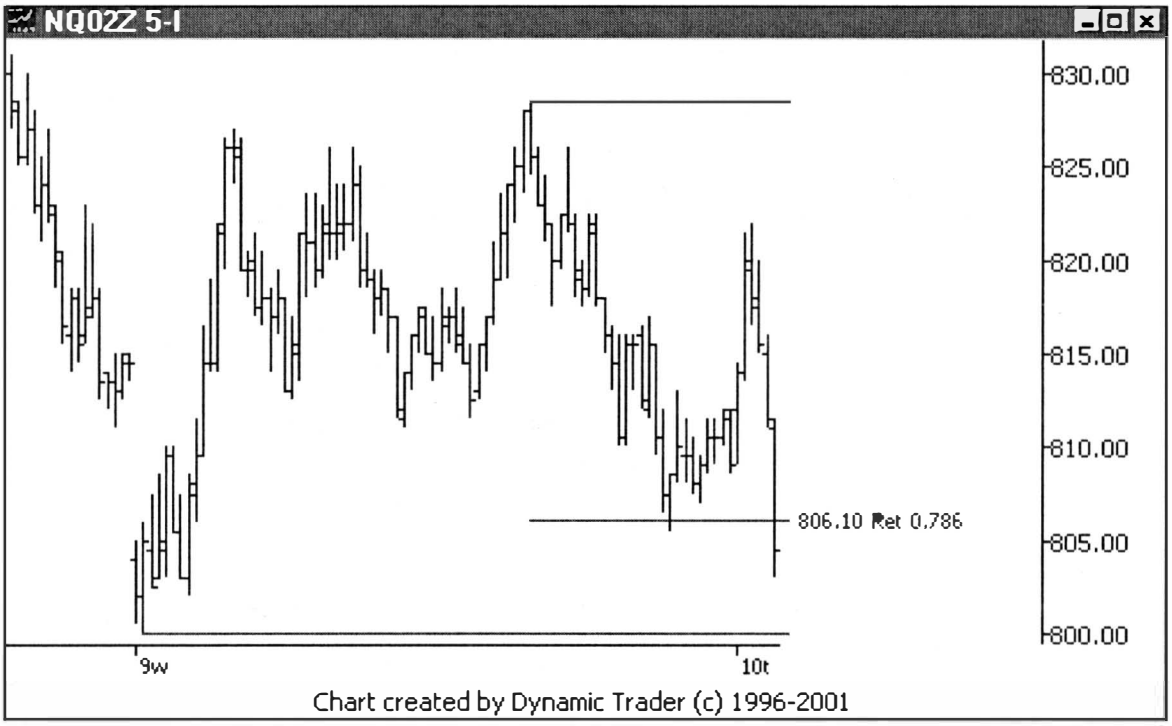
Here's an interesting case, also, of yet one more thing that you may see. Here we have what appears to be a nice .786 reversal. See figure 6.8.

**Figure 6.8**



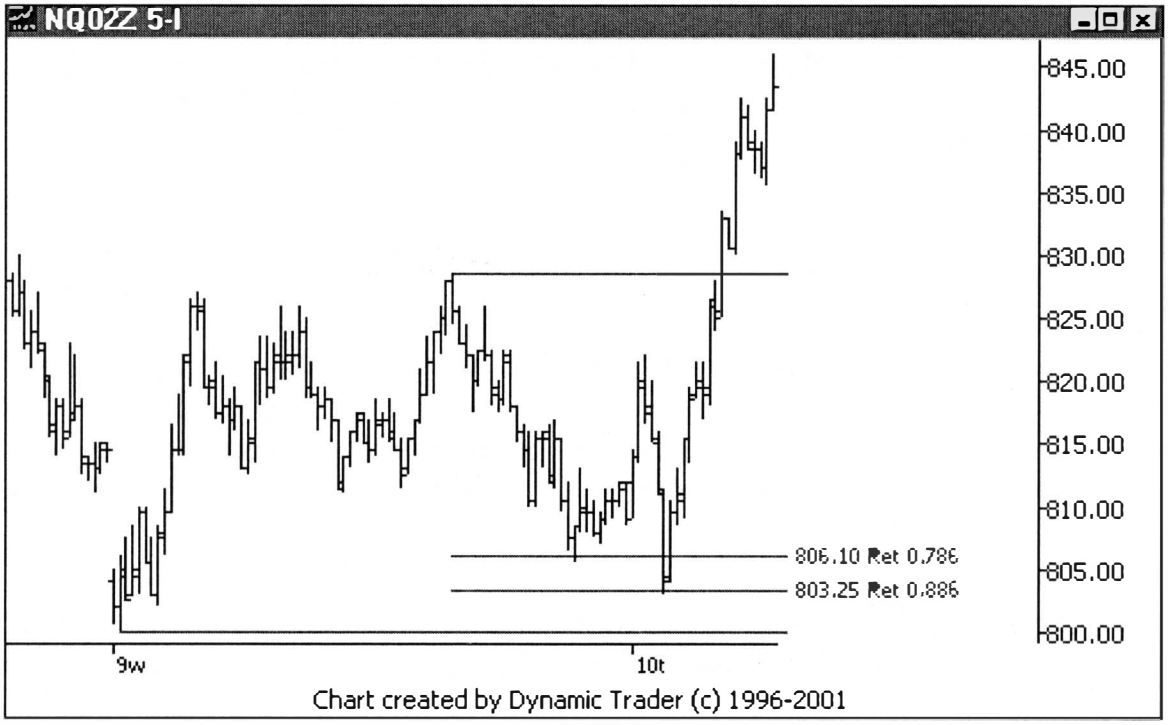

But look at what happened shortly after this chart was captured. See figure 6.9.

**Figure 6.9**




The issue reverses and breaks the .786. Now, let's see how it played out further ahead in time. See figure 6.10.

**Figure 6.10**




It went back to the .886 and put in the final reversal. Sometimes the .786 simply doesn't hold, and sometimes it provides a bounce and then is broken after the bounce.

Let's continue on. Since every time I have derived a Fibonacci number I have also calculated its reciprocal, I immediately flipped the .886 over to discover one of the most fascinating things I've found since studying the markets: the 'one one three'.

$$\frac{1}{.886} = 1.128$$

The reciprocal of the .886 is 1.128. Although I've tried to keep to three places past the decimal in all my presentations of the Fibonaccis, I'm going to break with that convention here and call this one the 1.13. Now granted, the three decimal places I list for most of these Fibonacci numbers aren't necessary for trading; that's more precise than is practical. I think this convention came from starting with the three decimal places in the .618, which has become a quite well known and popularized number.

Although most writers keep it at the .618, a few round to .62. For the 1.272, though, almost all references just go with 1.27. Hence when I derived this 1.13 number (which, in keeping with how all these numbers cross reference, is also the square root of the 1.27), I decided to just round it to two decimal places and go with the 1.13. To the best of my knowledge, this is the first time this number has been quantified.

So why was this so fascinating? Well, many, many times I saw the 'double tops' and 'double bottoms' slightly exceeded, and then turn and rocket off in the opposite direction. This was the so-called 'shake out', false breakout, gunning for the stops or whatever one wants to call it. It's also seen in many popular false breakout strategies. But now I was quantifying it. I found a great deal of these moves that just exceeded the double tops and double bottoms were stopping very near the 1.13.

This allowed me to see where a shake out may go to. Furthermore, it allowed me to make a judgment as to when I felt that a breakout was a real breakout, or was just a headfake. If I was finding the .886 was the most significant number I was working with, I would have expected the 1.13 to be very significant, too. In practice, I found that the assumption was valid. See figures 6.11 and 6.12.

**Figure 6.11**

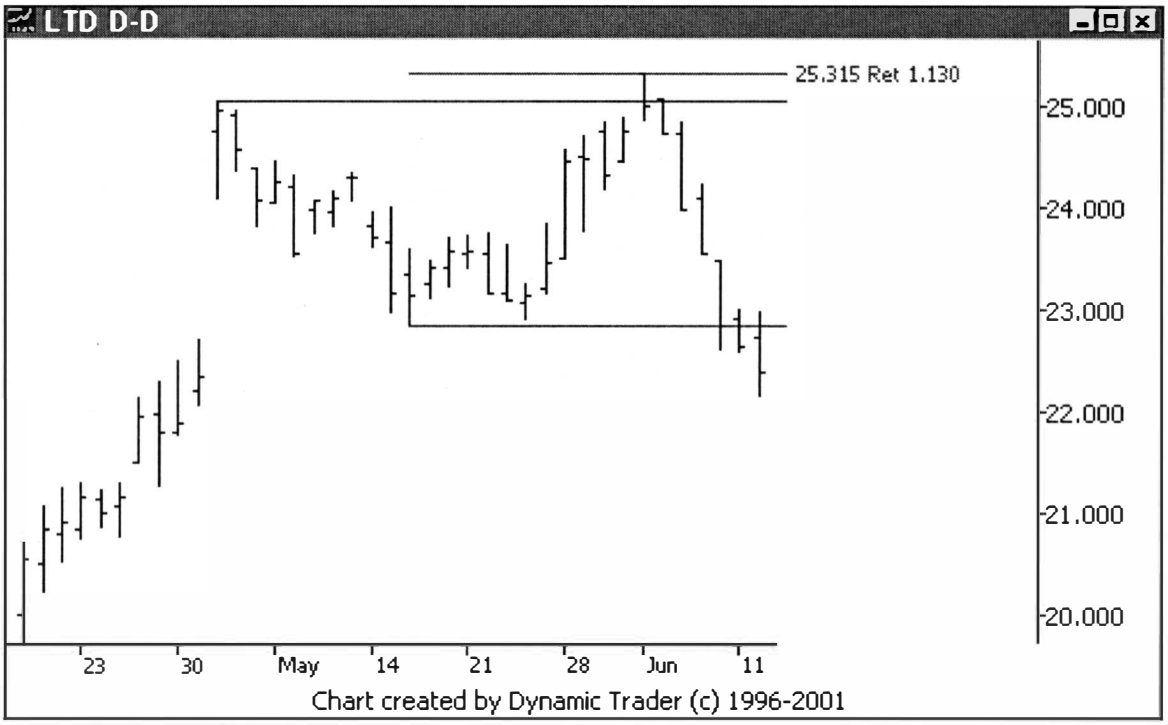
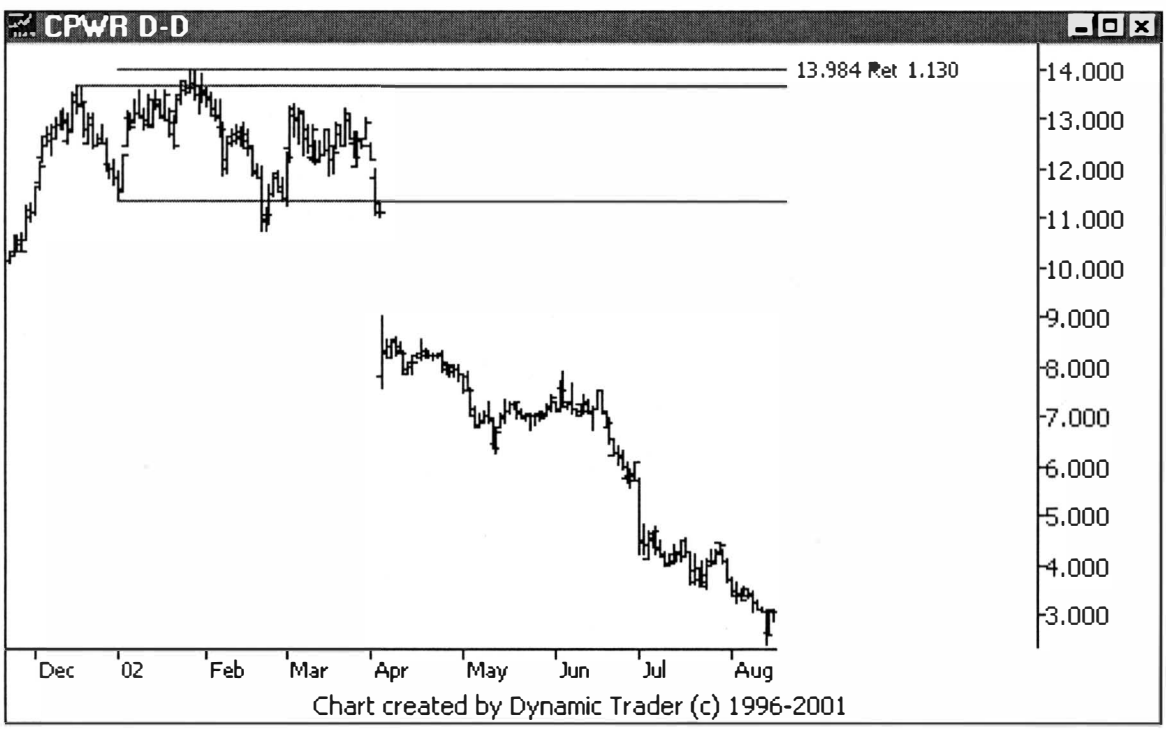



**Figure 6.12**



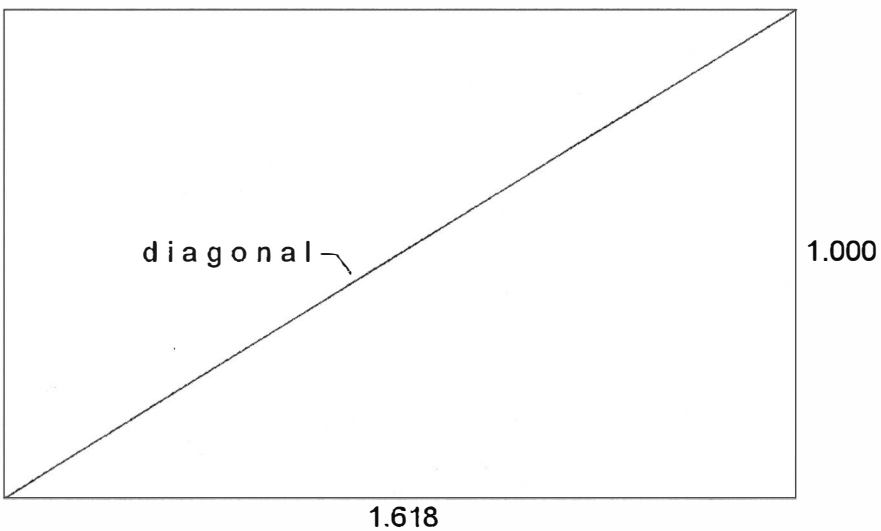
So at this point we have added the following numbers to our basic numbers:

.236, .486, .886, 1.13 and 2.058.

There is one more number I like to use that I haven't seen in any trading references, although I suspect it has been used here and there. I noticed a fair amount of issues turn just shy of the 2.000/2.058 area. Again, does this happen for 'harmonic' reasons, or because many traders are watching the 2.000 area and are jumping in early, or none of the above? I don't care. All I care about is trying to determine areas where I tend to see things happen that I feel might help my trading, things that might give me an edge. The *why* behind it is of no consequence to my immediate trading. I only harp on this because I want to point out my emphasis is on the chart, not on trying to discover the fundamentals behind the chart. If you feel those fundamental reasons are important for you to know, by all means pursue that. I just prefer to trade off the chart for the most part.

I started playing around with different geometric figures that had Fibonacci lengths on them, to see if anything interesting popped out. The most obvious layout to me was a 'golden' rectangle, a rectangle whose longer side was 1.618 times the length of its shorter side. As you may recall from our earlier discussion, this is the rectangle that was universally found in studies to be the most pleasing to the greatest percentage of people. So I constructed and labeled a rectangle with the sides of 1.000 and 1.618 and I drew in a diagonal. See figure 6.13.

**Figure 6.13**




I immediately wanted to know what the diagonal length was, so I did some quick high school math and found it was 1.902. Now here was a number that was just shy of the 2.000/2.058 area, and I stumbled upon it quite quickly. I started looking at charts and found this did look like an area I wanted to watch. See figures 6.14 and 6.15.

**Figure 6.14**

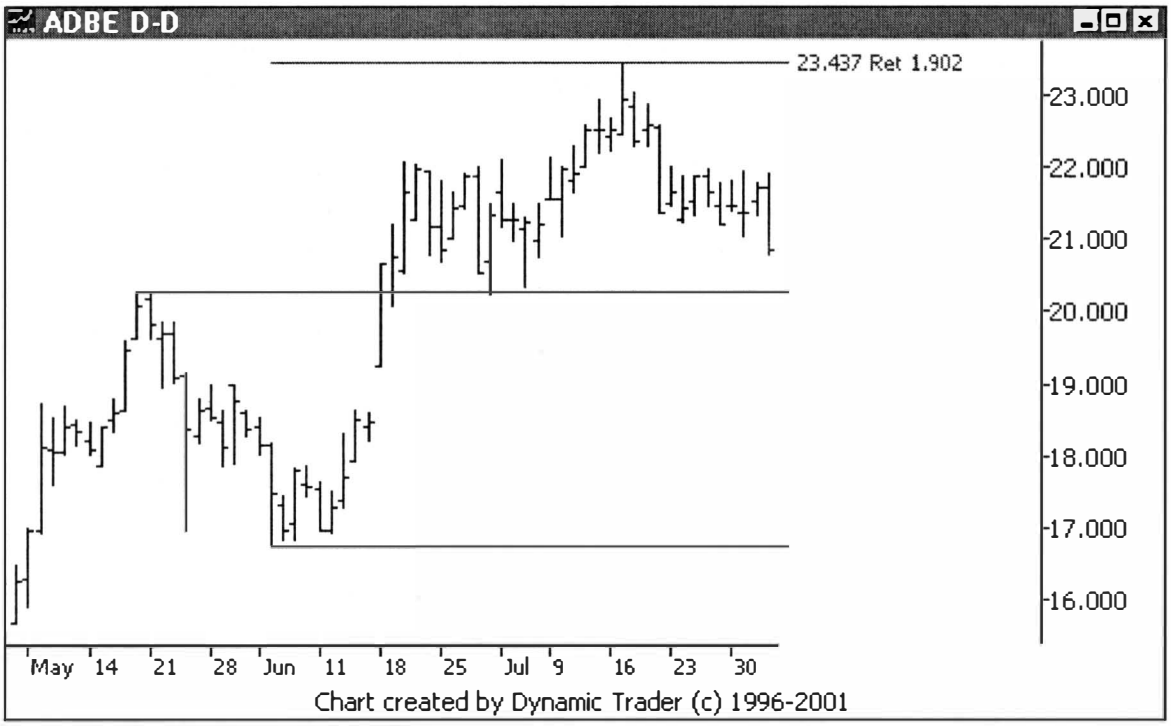
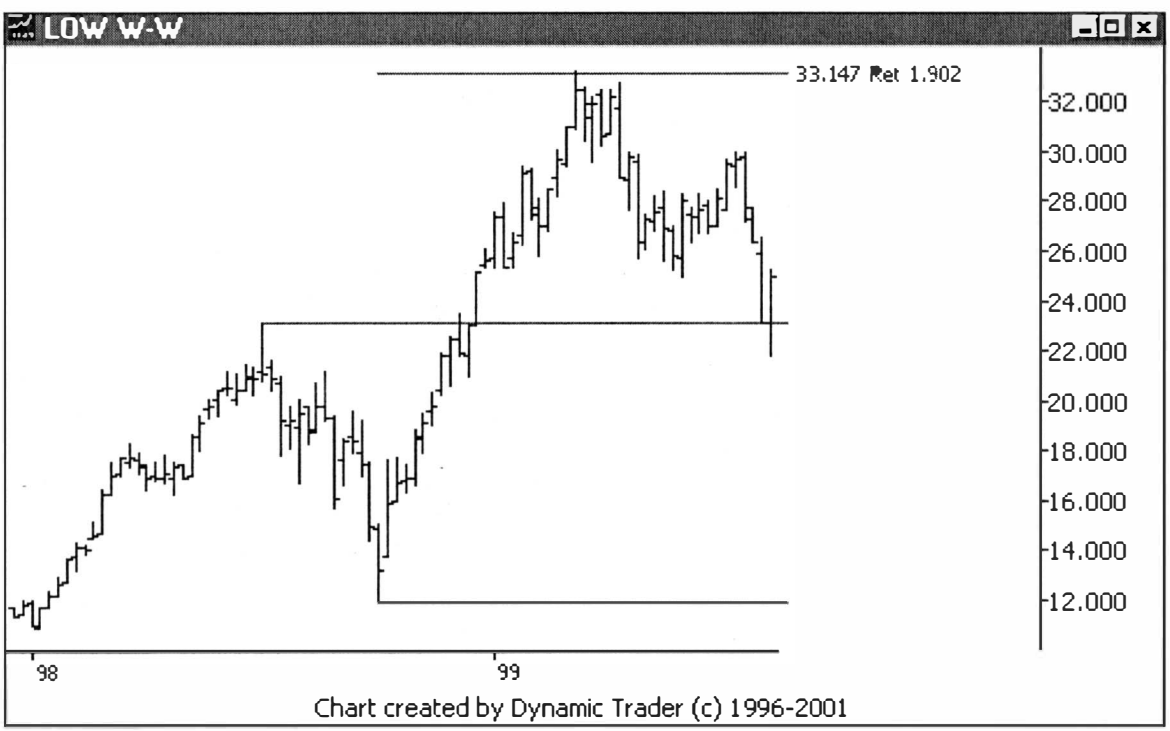



**Figure 6.15**



In doing the high school math to calculate the diagonal, I noticed a few numbers I'd seen before. Here's the Pythagorean theorem applied to the triangle in figure 6.13 (sorry to all those out there that hated high school math).

$(1)^2 + (1.618)^2 = (\text{diagonal})^2$

$1 + 2.618 = (\text{diagonal})^2$

$3.618 = (\text{diagonal})^2$

$1.902 = \text{diagonal}$

Not only did I get the 1.902 I was looking for, I noticed 2.618 and 3.618. The 2.618 is a fairly commonly used external retracement. As can be seen from the above derivation, it's just Phi (1.618) squared. I also noticed in my own studies that there may be an area around three and a half or so, and the 3.618 might be it. These are pretty extreme external retracements, but you do see some extreme moves that come up occasionally. See figures 6.16 and 6.17.

**Figure 6.16**

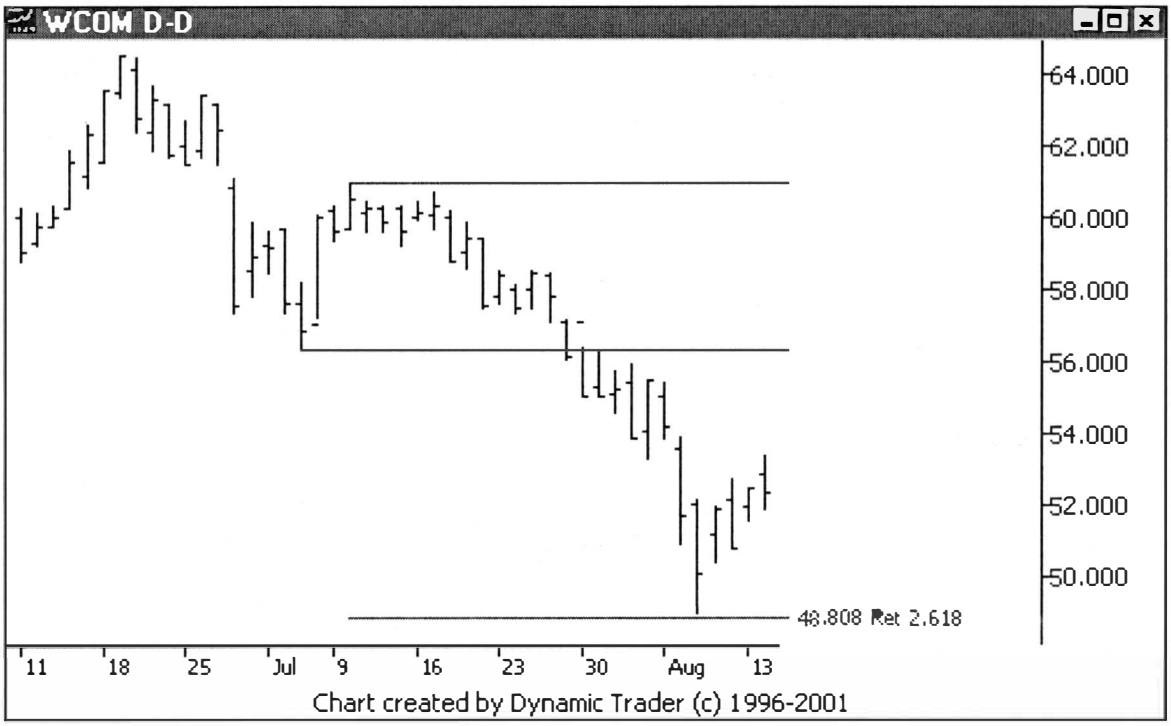



**Figure 6.17**



Let's add in a few more extreme external retracements while we are in this area, and we'll sum up what we have and call it quits. I think we have plenty to work with. Notice, up until now, whenever I decided to add a number into the group I also liked to add its reciprocal. This only makes sense: if a number is valid, the number 'on the other side of 1.000' should be, too.

We haven't determined what the reciprocal of the .382 is yet, so let's do that one:

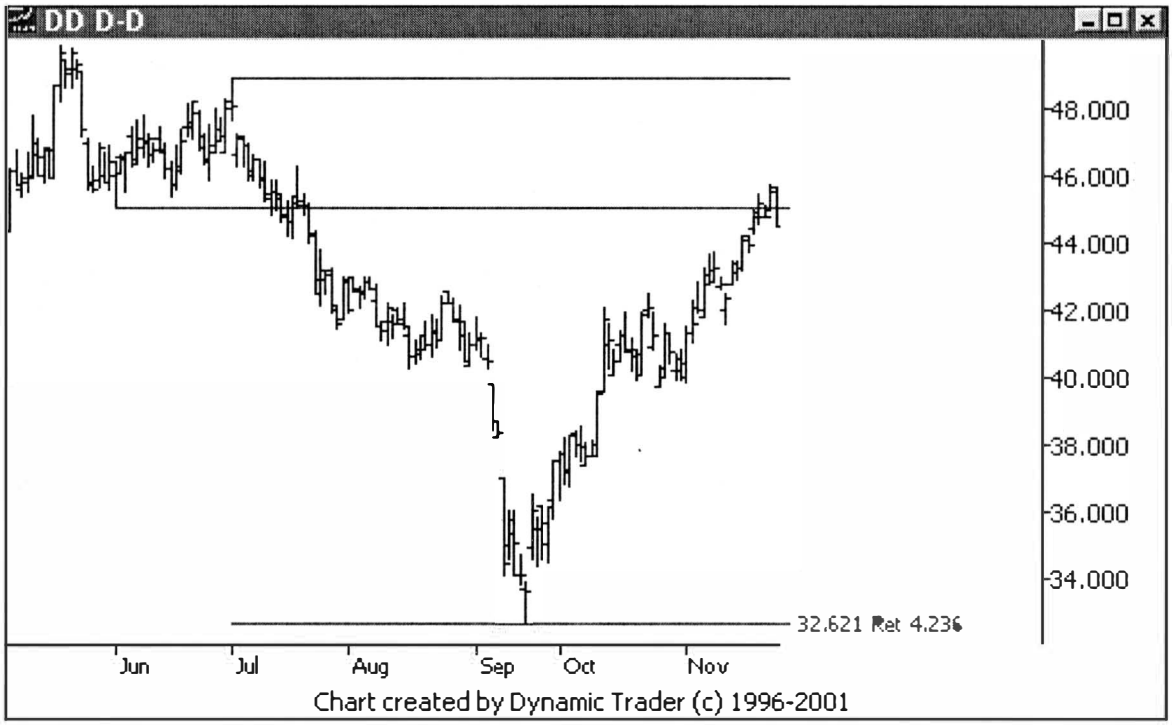
$$\frac{1}{.382} = 2.618$$

As you guessed, this isn't a coincidence. We've seen that the numbers are frequently derived in multiple ways. So at this point I'm sure I want 2.618 in the group. I also haven't flipped over the .236:

$$\frac{1}{.236} = 4.236$$

Here's a number you will see in many references, usually as the 4.24. It is also generally the most extreme external retracement I will look at. See figure 6.18.

**Figure 6.18**




Now we have all the Fibonacci numbers we need for our group, and all the numbers are matched with their reciprocals. I'm sure you are glad to be done with all that, but I'll have to disappoint you temporarily, as I want to add three more numbers into the group. First, I want to add in a non-Fibonacci number, but one we know is related to Fibonacci, as we discussed earlier. I want to add in pi ($\pi$): 3.14. I'll just use two decimal places, since that's how it is referred to most often. I first learned about this one from Scott Carney. He's used it quite a bit in his book, and especially on his website with some of his new patterns. See figures 6.19 and 6.20.

**Figure 6.19**

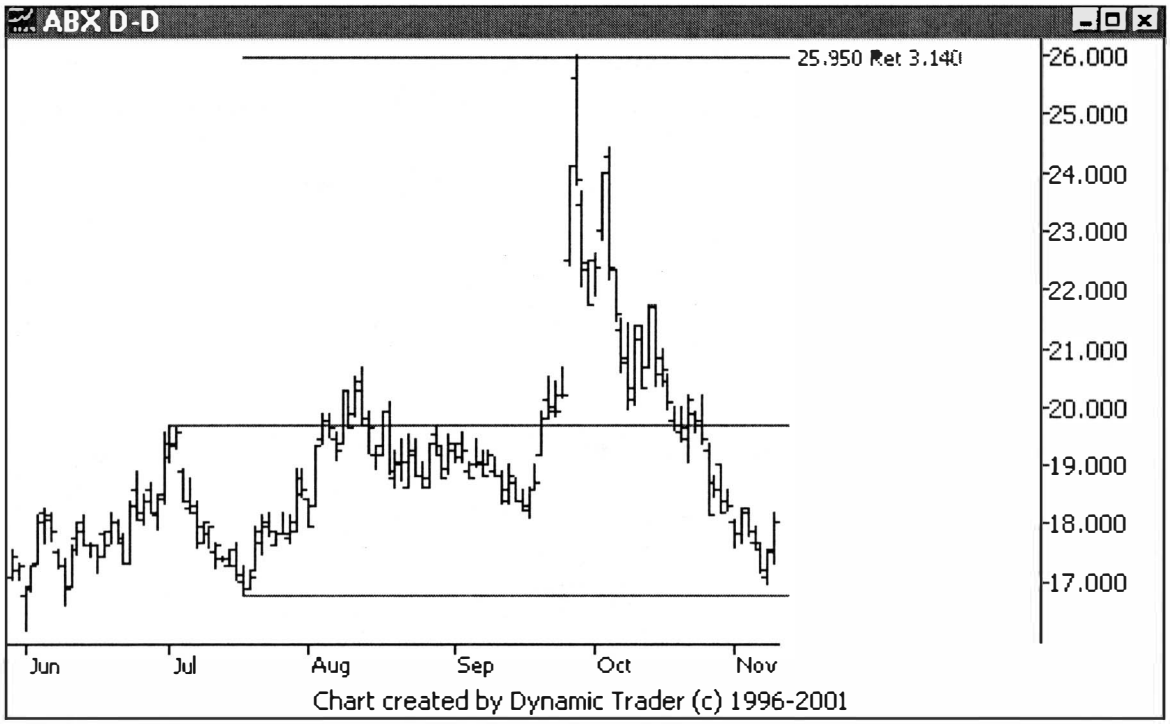
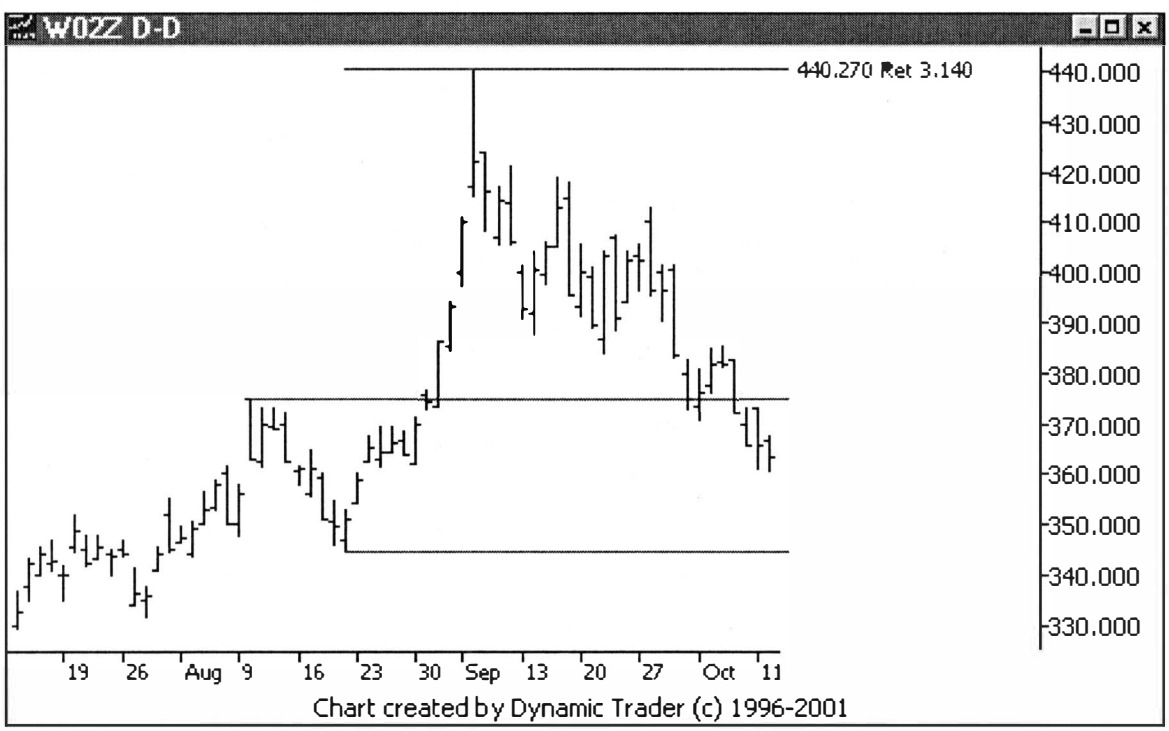



**Figure 6.20**



Second (do you believe me this time?), I want to add in 2.236, frequently rounded to 2.24. This number is the square root of 5. Recall how, way back, we started out with Phi, the golden ratio, and the formula was the square root of 5 plus 1, all divided by 2. I'll leave it as an exercise for the reader to see if he or she can show whether the 2.236 is a 'true' Fibonacci number, or not. Lastly, let's flip this one over to get .447, and stop there. If I don't stop now, I may just keep adding them on and lose the rest of my readers. See figures 6.21 and 6.22.

**Figure 6.21**

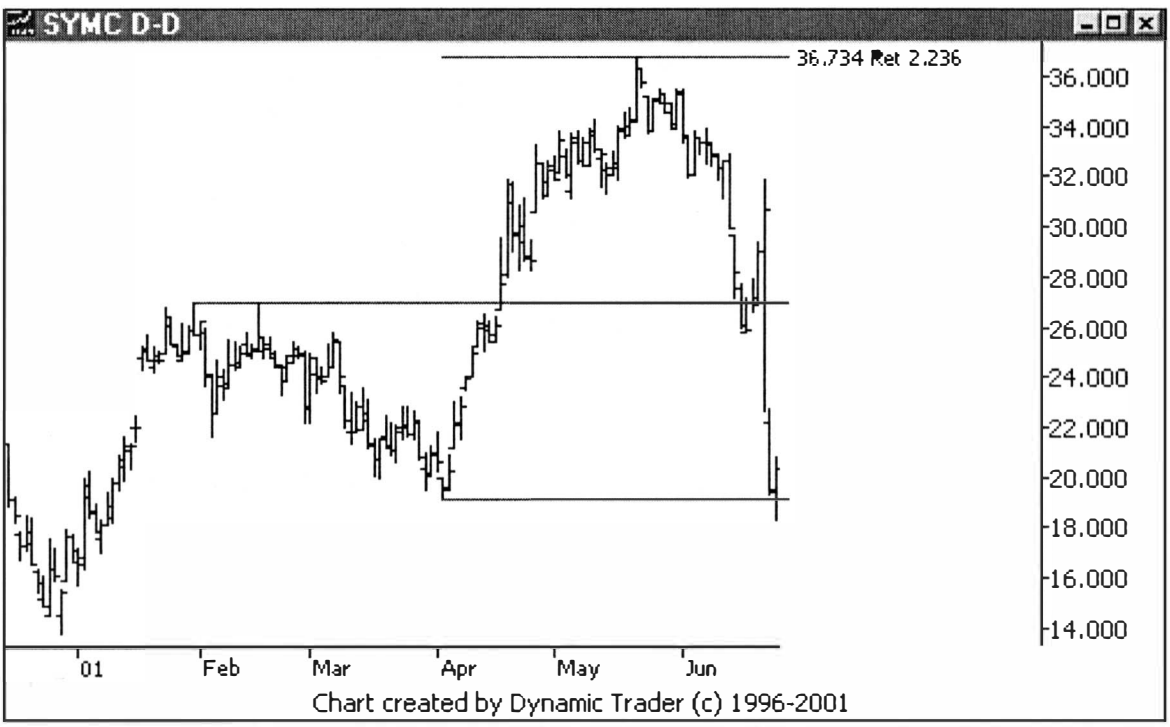
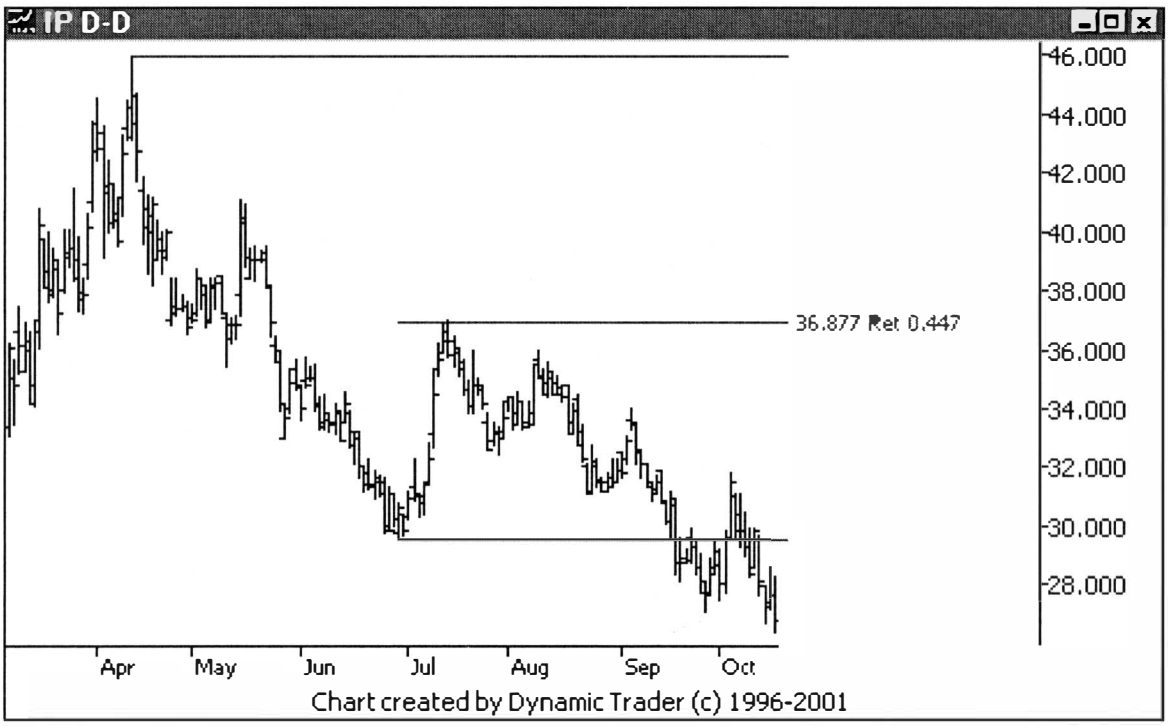


**Figure 6.22**




Let's sum up our rather extensive list of numbers:

.236, .382, .447, .486, .500, .618, .786, .886, 1.000, 1.13, 1.272, 1.618, 1.902, 2.000, 2.058, 2.236, 2.618, 3.14, 3.618 and 4.236.

I would like to add one final comment before we proceed to the next chapter. The use of the square root of 2 (which equals approximately 1.414), and it's reciprocal (approximately .707), have become increasingly popular to use in the same manner as the Fibonaccis. I do see a lot of moves that turn right on these numbers. Now, again, I don't know if this due to the increasing popularity of these numbers, or the fact that they lie right in between the .618/.786 and 1.272/1.618 areas, and are logical spots for overshoots. Or is it for another reason? I can't say. I only know they are numbers that seem to be points at which a move may turn.

For now, I won't add these in, or we will have so many numbers they will begin to lose any sense. I merely wanted to point them out so that the reader will be aware of them, and can do further research if so inclined. I *will* say that I have found two Fibonacci derived numbers that are very close to these

two ‘square root of two’ numbers. I may present the numbers in future material, but the dilemma is certainly arising about how many numbers are practical to work with.

# Chapter 7

## A Brief Look at Gann

I wasn't sure if I should even include this brief look, and if I did, should it be in some sort of appendix. I decided to have it be a short chapter before we move on. Most people who study Fibonacci with respect to trading will eventually look over at least some of the work of Gann. Gann's work is pretty extensive and I won't get into it in this book, except for pointing out one interesting observation that came to me one day when playing with the Fib numbers and my calculator.

Gann did some work based on an idea of eighths. He looked at $\frac{1}{8}$, $\frac{2}{8}$, $\frac{3}{8}$, $\frac{4}{8}$, $\frac{5}{8}$, $\frac{6}{8}$, $\frac{7}{8}$, $\frac{8}{8}$, $1\frac{1}{8}$, $1\frac{2}{8}$ and so on. So you might look at a $\frac{3}{8}$ retracement or a $\frac{5}{8}$ retracement or something along those lines. Now let's look at these Gann numbers and some of the numbers we just derived.

| Eighths | Fibonacci |
|---|---|
| $\frac{2}{8} = .250$ | .236 |
| $\frac{3}{8} = .375$ | .382 |
| $\frac{4}{8} = .500$ | .486 or .500 |
| $\frac{5}{8} = .625$ | .618 |
| $\frac{6}{8} = .750$ | .786 |
| $\frac{7}{8} = .875$ | .886 |
| $\frac{8}{8} = 1.000$ | 1.000 |
| $1\frac{1}{8} = 1.125$ | 1.128 (1.13) |
| $1\frac{2}{8} = 1.250$ | 1.272 |
| and so on... | |

I am only going to make one comment here: Hmmmmm. No, they are not exact, but when you see the Fibonaccis in use, and see that we aren't looking at these numbers as exact points but as areas to look at, it sure makes me wonder. These eighths Gann spoke of are just *soooo* close to the Fibonacci numbers. Was the same idea discovered from two different routes? I've never seen this presented anywhere before. I think it is worth thinking about, and I wanted to provide some food for thought for the reader.

# Chapter 8

# The Trend

This chapter and the following two chapters outlining grouping and trading techniques are where the meat of the useful nature of this material will be presented. So far, all the previous material was presented to enable you to: recreate on your own the following techniques; and experiment with them to suit your own trading needs. Be proud. You've wallowed through all the background mathematics and now are ready to see what can be done with it.

As discussed earlier, the main reason behind determining the Fibonacci areas is to establish places we think might act as support or resistance. Once an area is determined, a decision must be made on the technique to be used to implement a trade (based on the assumption that the area is a valid support or resistance area). Now think about this simple but often overlooked idea. If an area of support or resistance 'holds', the price won't go through the area. It will act as a barrier, but it may or may not reverse the price.

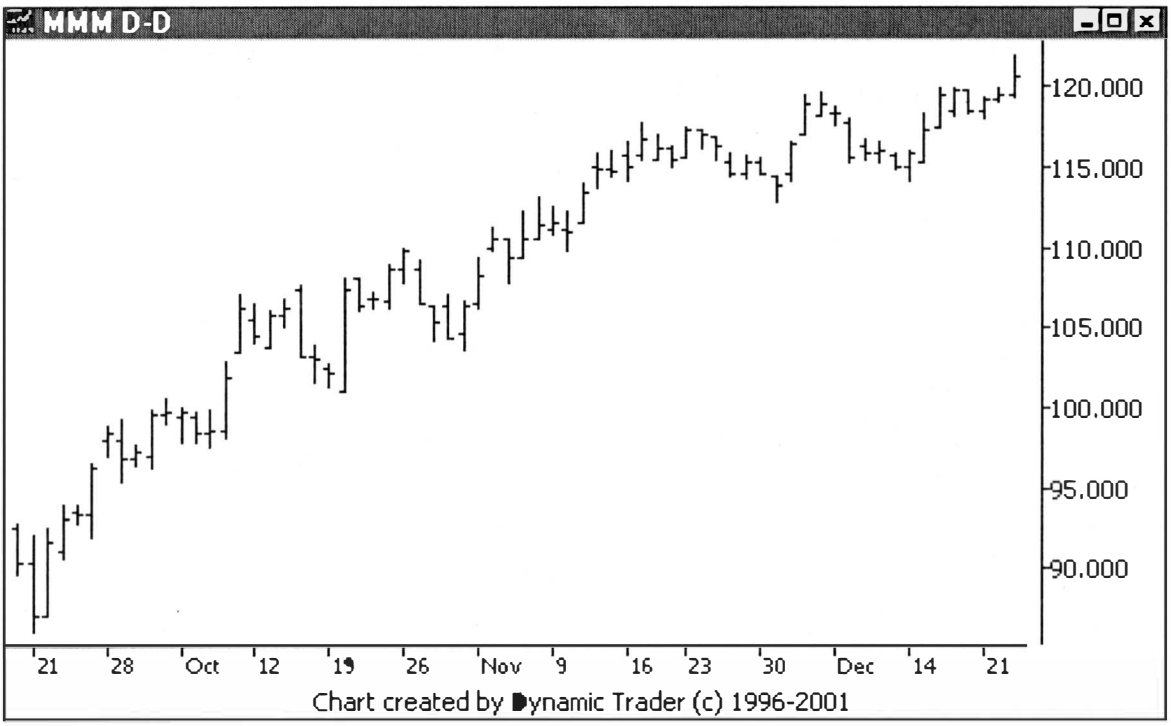
When trading, the usual assumption, if one is using areas of support or resistance, is that the price action will reverse off the area. The trade makes money because you are now involved with a new trend. The price may just stop and then go sideways, but you are playing for the trend to change in the area you are looking at. What you are doing is betting on a reversal. You are *picking a top or a bottom.*

Now wait, I thought the trend was your friend, and that you never want to try to pick tops and bottoms. Well, I think that's generally true. But as I examined many charts of the trades I was doing, I found that the techniques that I used were just about always attempting to pick tops and bottoms. Before you get too confused, let me explain.

For any given chart you will see uptrends, downtrends and sideways periods. But notice for an uptrend, for example, how it has small pullbacks as it goes up (recall 'trees don't grow to the sky', from Chapter 2?). Well, on a smaller timeframe these pullbacks are actually downtrends. So you are downtrending at that moment within a larger degree uptrend. You can play that word game over and over by looking at multiple smaller and larger

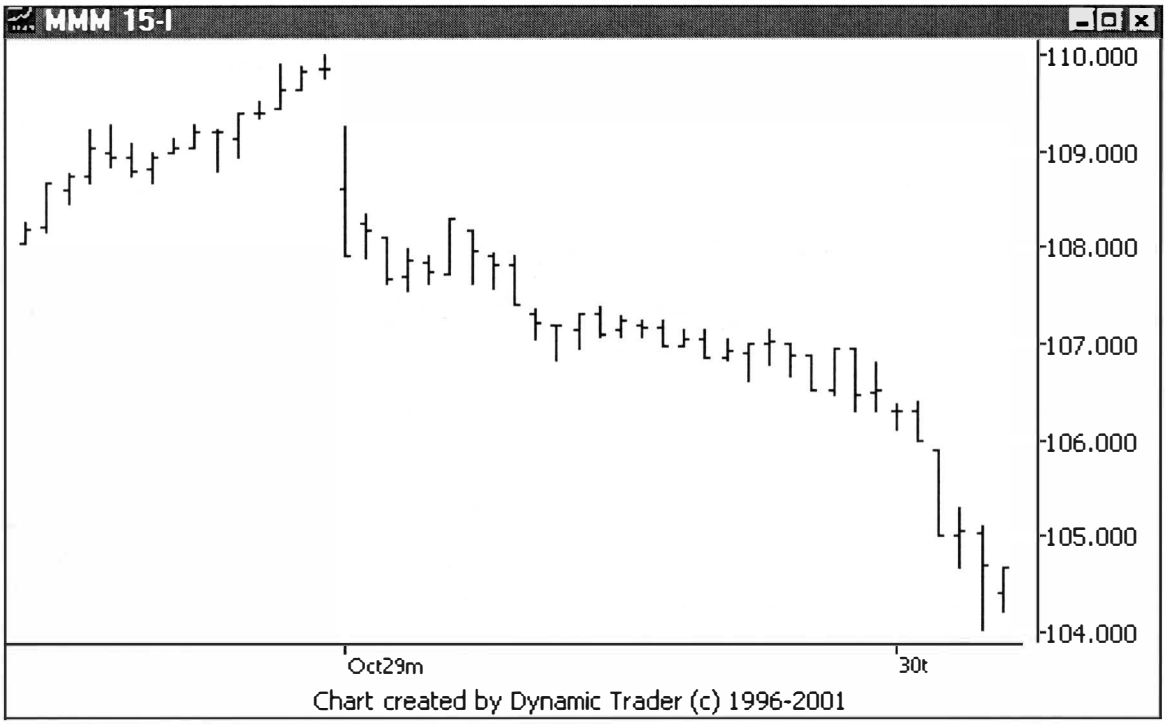
timeframes, finding a near infinite number of uptrends and downtrends on the same chart. See figure 8.1.

**Figure 8.1**




Here MMM is in a strong uptrend on the daily chart. There are multiple pullbacks where one might attempt to enter a trade in the direction of this strong uptrend. Let's look at the pullback that starts October 29, on a 15-minute chart. See figure 8.2.

**Figure 8.2**

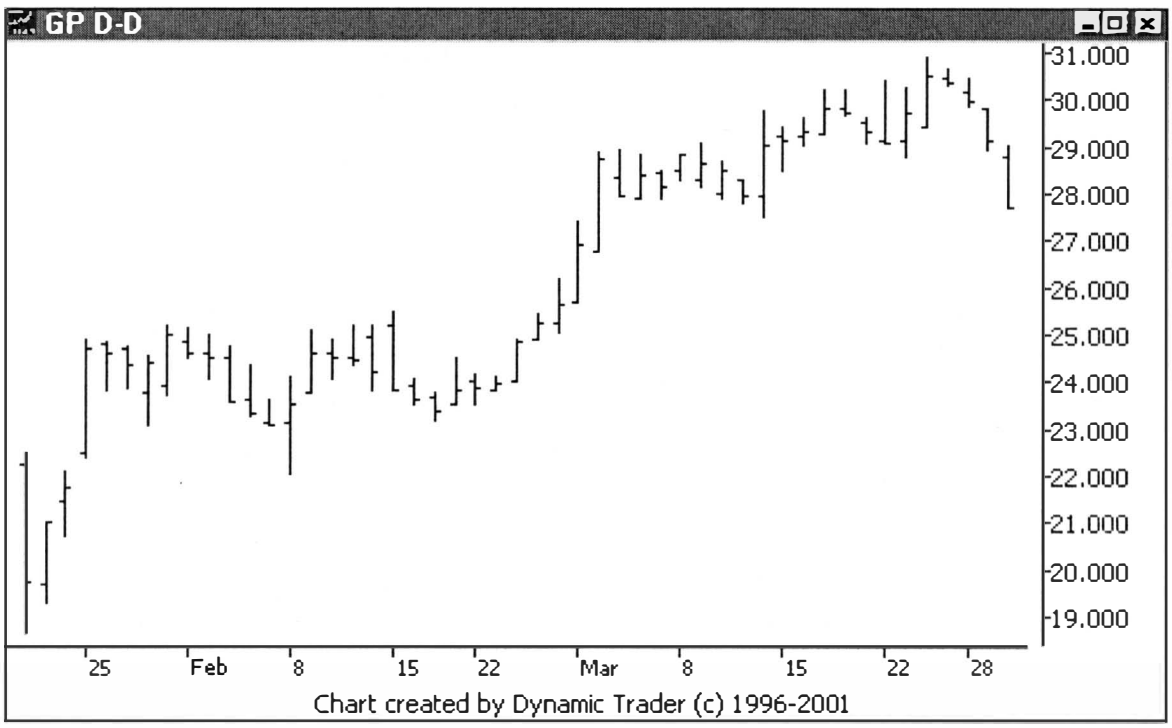



This pullback is a clear downtrend on the 15-minute timeframe, in the context of a larger degree uptrend on the daily timeframe.

Now, here's the point. Say you want to stay with the trend, so you find a timeframe that you want to trade, and find an uptrend you want to get on board. You decide that you will enter on a pullback (a very common and highly used technique). You are all about the trend, not fighting the established line of motion, since you know picking tops and bottoms is exceeding difficult, right?

You decide on the pullback you like, and use any one of many available techniques to trigger you into the trade. Techniques that you hope will tell you when the pullback is over, or likely over. After all, you don't want to catch a falling knife. So far, so good. You are establishing your position with the trend. See figure 8.3.

**Figure 8.3**




Do you see the problem, though? Dial your chart down to a lower timeframe and look at just the pullback. See figure 8.4.

**Figure 8.4**




I hope you see what you've just done. You've tried to pick the bottom, in this case, of what looks like a clear downtrend. Now wait, this is exactly what we just said we were not going to do. In my opinion, this is the trader's dilemma.

Unless you want to just buy into a rising market, or sell a falling market and hope it keeps going, you will be faced with this dilemma. I find it very interesting that there are many, many references out there that tell you how important it is to go with the trend, and yet very few will point out what we are looking at right now. So what do we do?

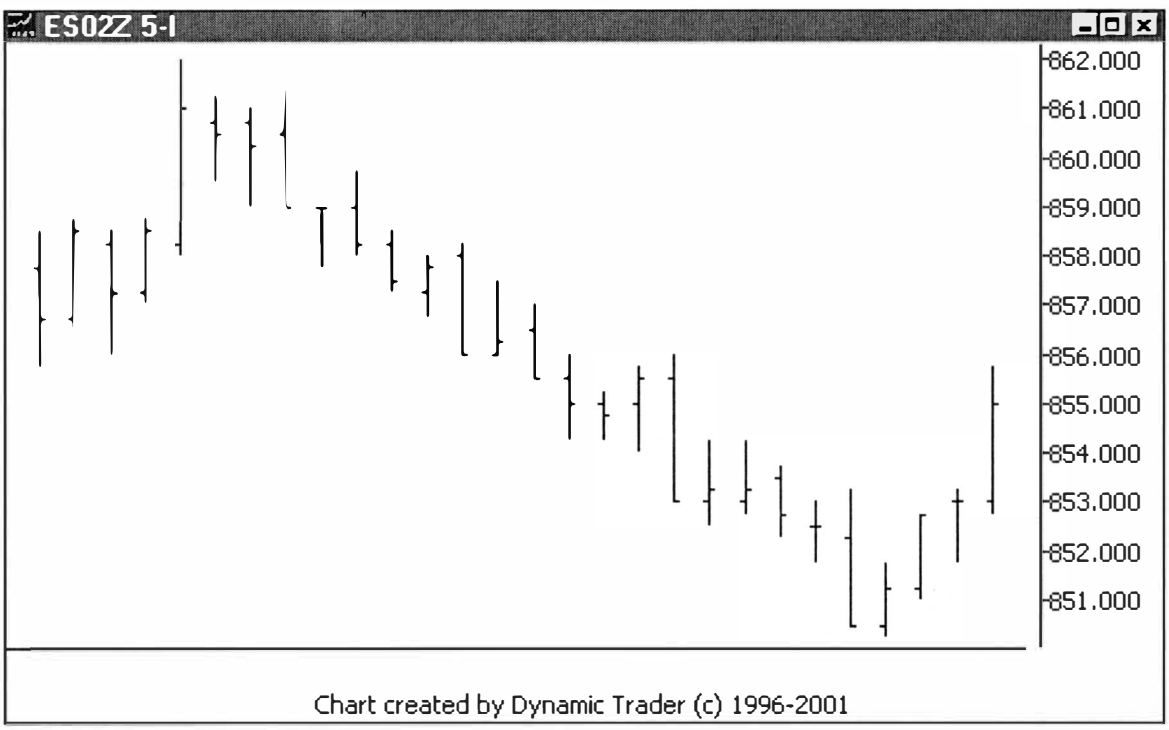
I think the first thing we should take note of is the importance of a given trend. The higher the timeframe the trend is in, the more important that trend generally is. The idea is that a trend in motion will stay in motion until something acts to change that. So a trend on the daily has more 'momentum' than a trend on a 5-minute chart, all other factors being equal.

For this reason I generally follow the common practice of looking at three timeframes when I trade. First, I determine the traded timeframe; the

timeframe that shows a trend I want to trade. Then I choose a higher timeframe, usually three to five times as high. I use this timeframe for context, to see if what I think is a nice trend might actually be a pullback within a larger trend. Lastly, I determine a 'trigger' timeframe; again usually three to five times lesser than the traded timeframe.

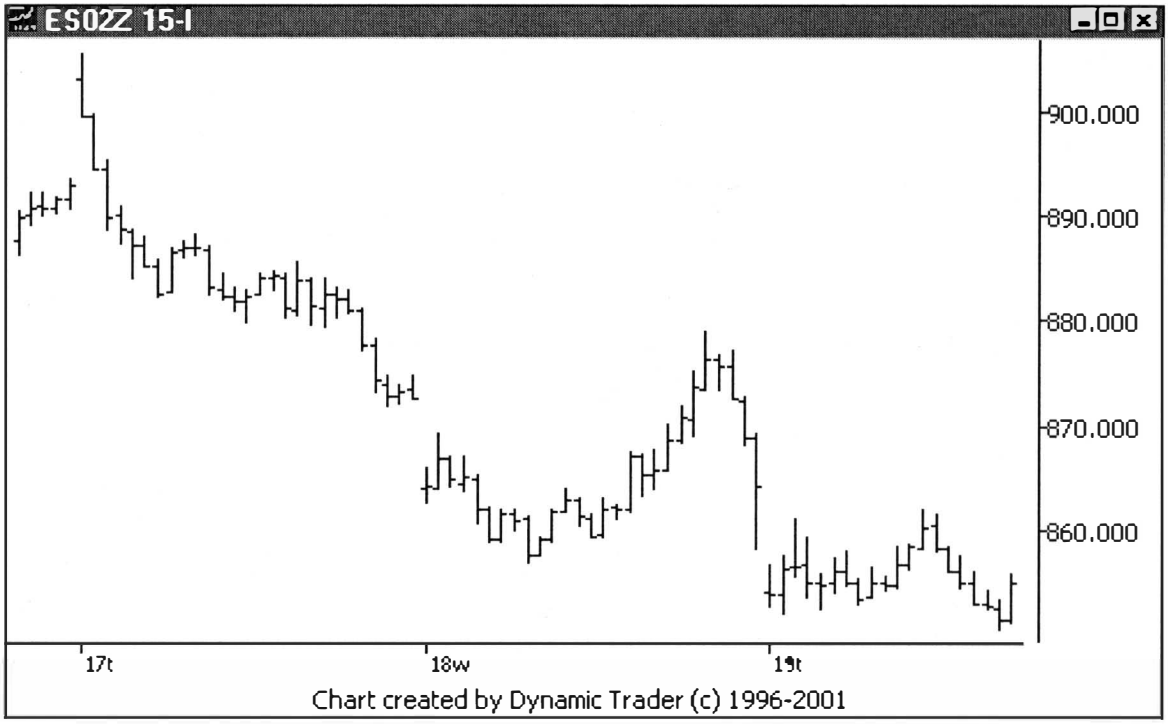
For example, sometimes I trade on the 5-minute chart with the 15-minute for context and the 1-minute for triggers. I will also quickly look at the much larger timeframes to make sure that I have the overall picture; hence, I would also look at the 60-minute, daily and weekly charts in this case. I just want to make sure there are no surprises waiting that I can't see on the smaller timeframes. See figures 8.5-8.9, with explanations.

**Figure 8.5**




Let's say I see this downtrend on the 5-minute chart. A pullback develops and I want to try a trade with this 5-minute trend. I look to the 15-minute chart to see what the larger scale picture is for this issue right now. See figure 8.6.

**Figure 8.6**

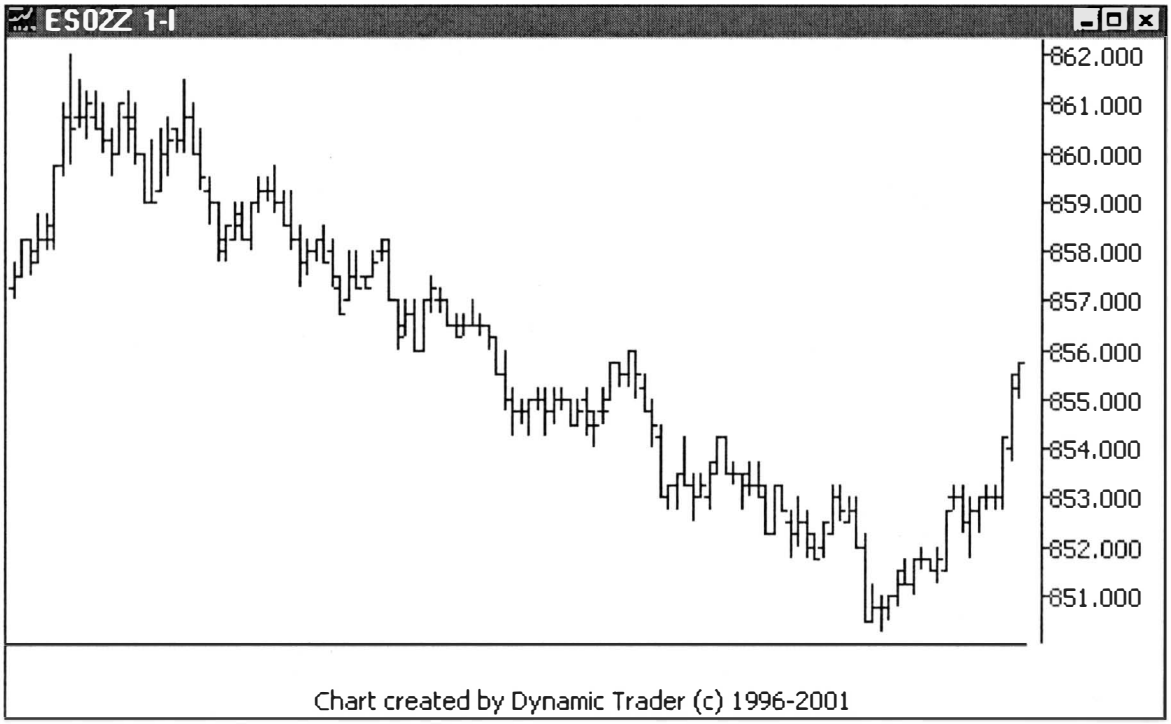



The last bar on this 15-minute chart encompasses the entire three bar pullback from the 5-minute chart in figure 8.5. The perspective is quite different with this additional information. It shows a much larger scale downtrend on the 15-minute chart.

At this point let's not critique the merits of this trade, or evaluate things we may see on this 15-minute chart. Yes, we all see the possible near exhaustion move down at the end of the previous day that followed a larger than usual pullback, the gap down, the staleness of the trend, the sideways action developing, and so on. Let's just use the chart right now to determine that the 15-minute chart trend is also down.

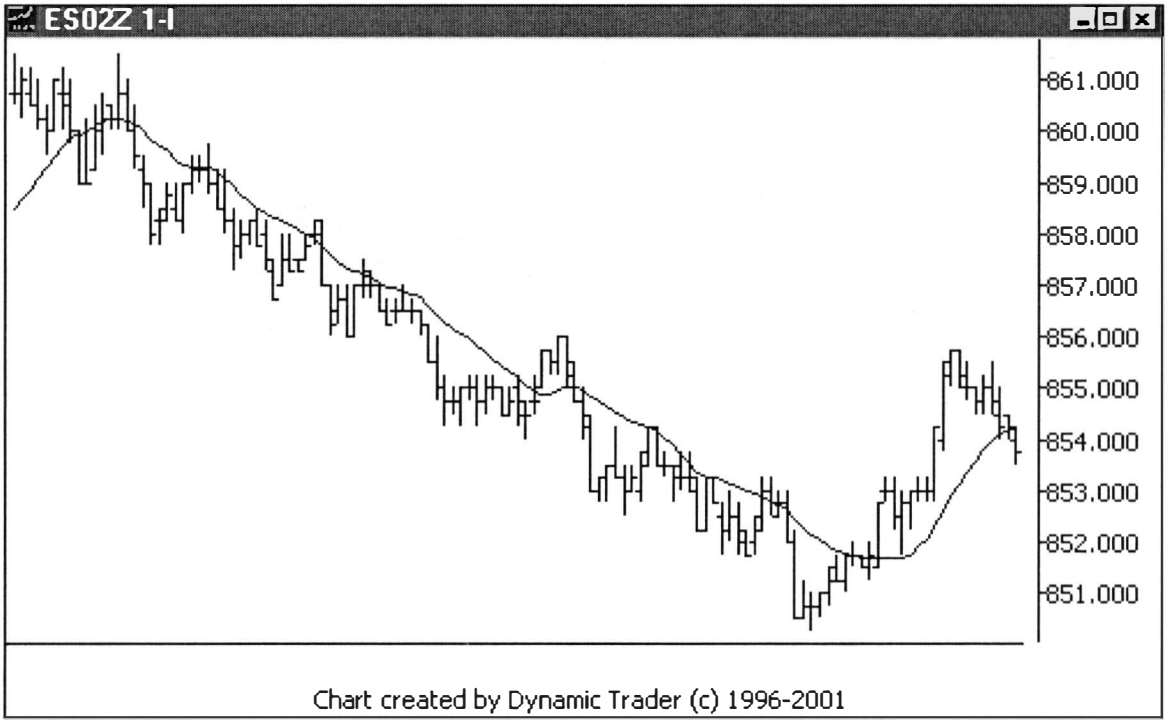
Let's also note that right before the pullback started, the price just broke that last swing-low, so we are in a position where a market decision is likely to be made. The downtrend may be over and this is the typical shake out or we may be in for another leg down. Assuming we are going to take the trade on the 5-minute chart when we feel the pullback is likely over, let's dial down to the 1-minute and look at that. See figure 8.7.

**Figure 8.7**




At this point the 1-minute trend is straight up. I would look for a sign that the 1-minute trend is turning, and then look to initiate a trade. Remember, this will put me in line with the larger timeframe trend. To demonstrate, I'll pick an entry signal somewhat arbitrarily right now. (Keep in mind this is not a lesson on entry triggers. The particular trigger is for you to decide. There are reams of books out there that cover this, and perhaps I'll do one myself in the future, since I have my own ideas, too. The point here is that once we determine our setup, you use whatever trigger you personally prefer.) In this case I'll use a close below the 15-period simple moving average as my trigger. See figure 8.8.

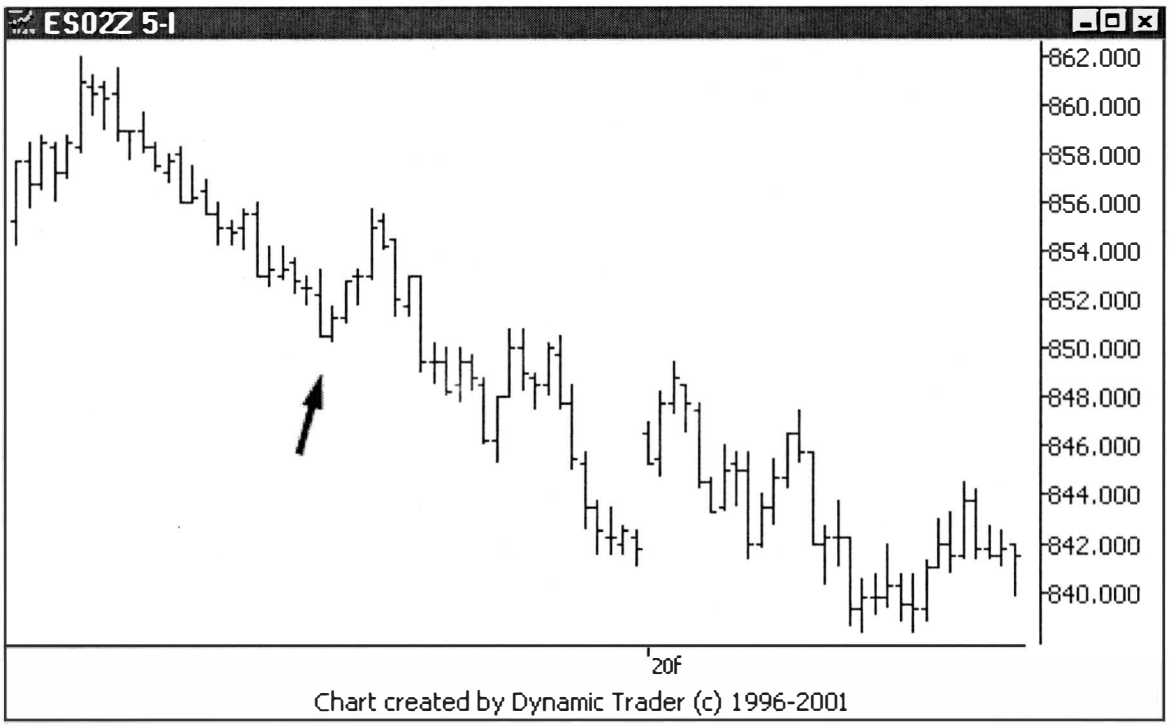
**Figure 8.8**




The trade, as seen in figure 8.8, is now triggered at this point.

Let's see how this trade played out. Where you would have taken the trade off would depend on your own trading style. If the trade was initiated off the 5-minute chart and triggered on the 1-minute, those may also be good places to look for a plan to close the trade. See figure 8.9.

**Figure 8.9**




The pullback we have been looking at is the first pullback in the downtrend on this 5-minute chart (see arrow on figure 8.9). As you can see, there was ample opportunity to profit on this trade, and despite the reservations previously discussed, this one did start another leg down.

One of the main points I want to convey is that we will be looking for trades in the direction of the trend, and trying to find a point where a pullback may end. The 'traded timeframe' is determined by the trend that we want to trade. Pick a 'traded timeframe' that clearly shows the entire trend and the pullbacks. We will then go down to a lower timeframe, and knowing full well that we are trying to pick a top or a bottom in this countertrend pullback, we will look for a trigger to do just that, *in the context of the larger scale trend.*

Sometimes it seems like the trend that we are following is getting old and has run a long way. This leads to the temptation to try to pick the end of the run, be it a top or a bottom (depending on if we are looking at an uptrend or downtrend). Using some of the Fibonacci calculations you can determine areas where the trend may end. I want to warn the reader, though; this is a very low-probability proposition.

I will, instead, suggest that you dial up to a larger timeframe, and look to see if this trend may be a pullback within a larger trend. If so, calculate possible places for the pullback to end. These areas where the pullback may end may overlap the areas calculated for the traded timeframe trend itself to end. Now you have something similar to what we have been developing all along. You have simply gone up to trade a higher timeframe. This would likely be a higher probability trade. The idea is: *don't try to pick when the traded timeframe trend will end.*

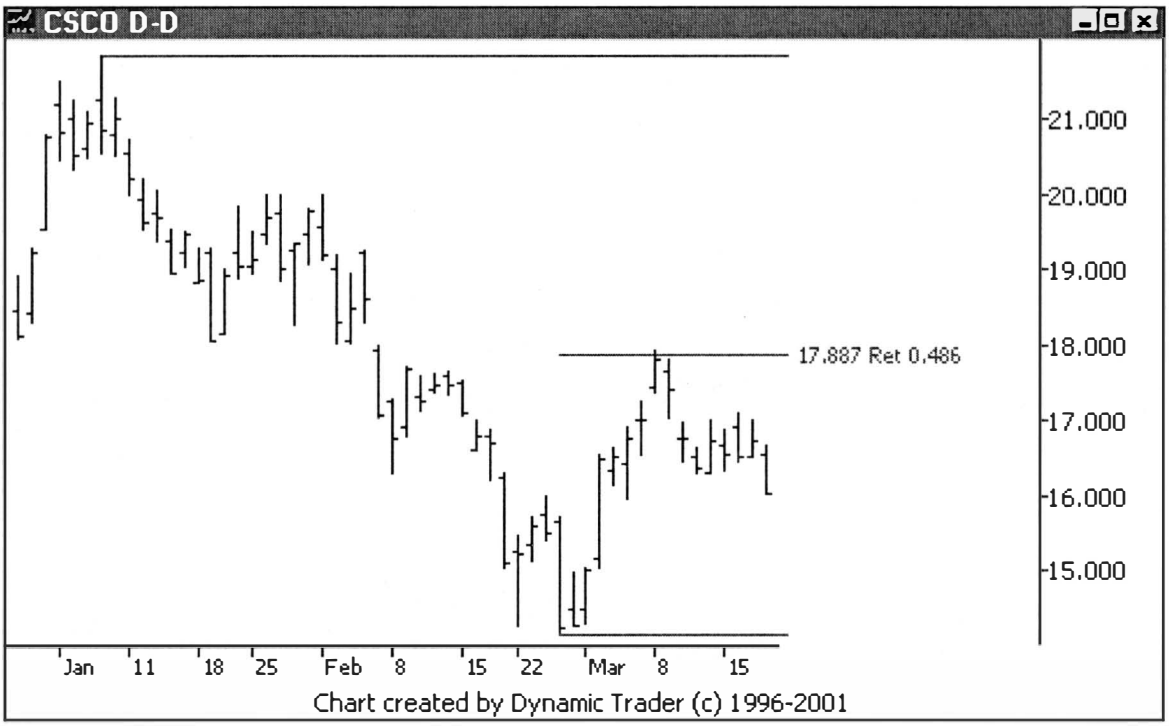
# Chapter 9

## Groupings

So far all we've done with the Fibonacci numbers is to show some single number areas of possible support or resistance. While these examples showed quite well what could happen at a Fibonacci number, I would be reluctant to trade based on one number alone. I want to know that the odds appear to be more in my favor. For that reason, I want to see multiple Fibonacci numbers stacking up in a fairly tight area. In other words, I want to see a group of numbers together in a small zone.

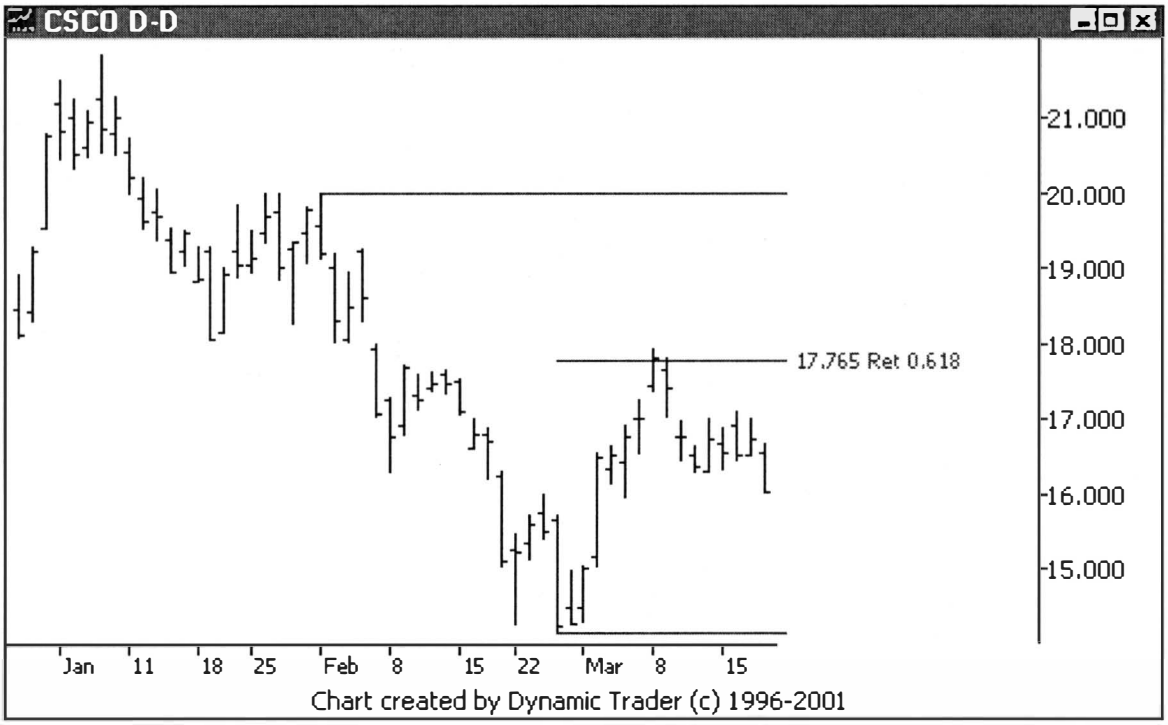
One of the things I discovered when I first started experimenting with the Fibonacci numbers was that each swing-high or low could be used as its own separate point for additional Fibonacci calculations. If a swing point is harmonically generated (i.e. is at a convergence of Fibonacci number calculations), then new calculations can be derived (from this additional swing point) that would overlap some of the previous calculations. Some of the current retracements, projections and expansions would land on top of some of the calculations from the previous swings. Let's look at some simple examples and work our way up to more complex ones. See figures 9.1-9.7, with explanations.

**Figure 9.1**




Here we have a .486 retracement of a downtrend in CSCO. Let's look at another retracement (by itself first) on this same issue. See figure 9.2.

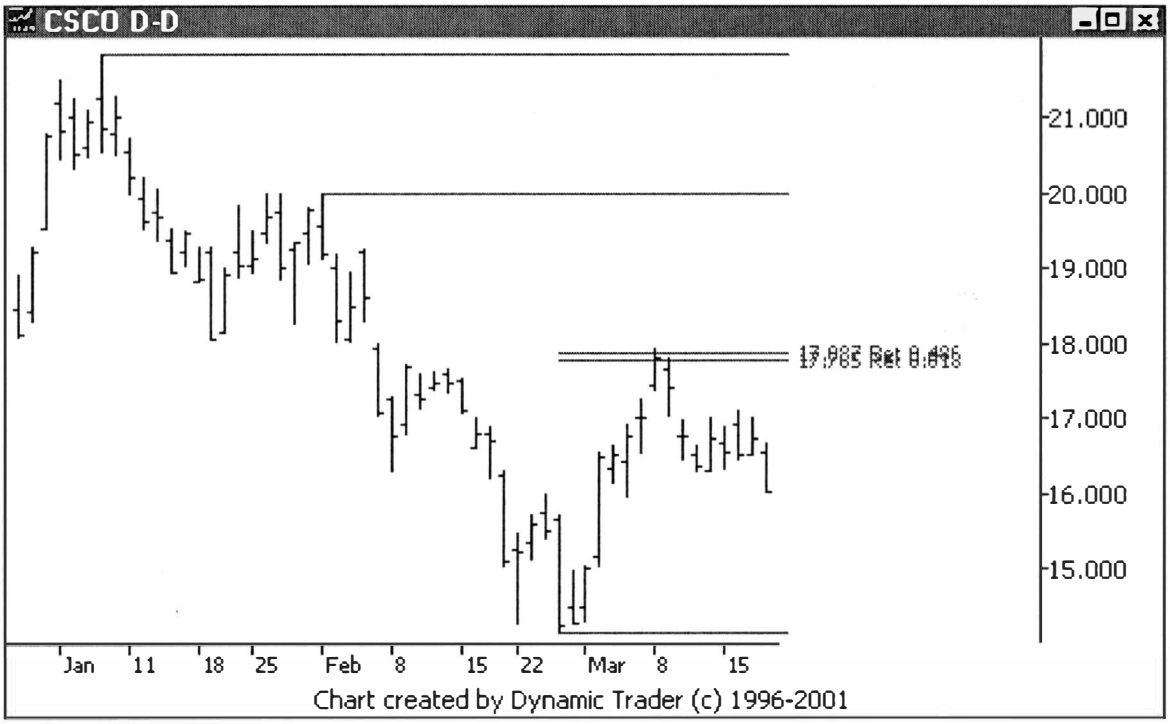
**Figure 9.2**




This time the retracement was started from a lower swing point.

Let's now look at both of these retracements at the same time on the same chart and see if anything interesting shows up. See figure 9.3.

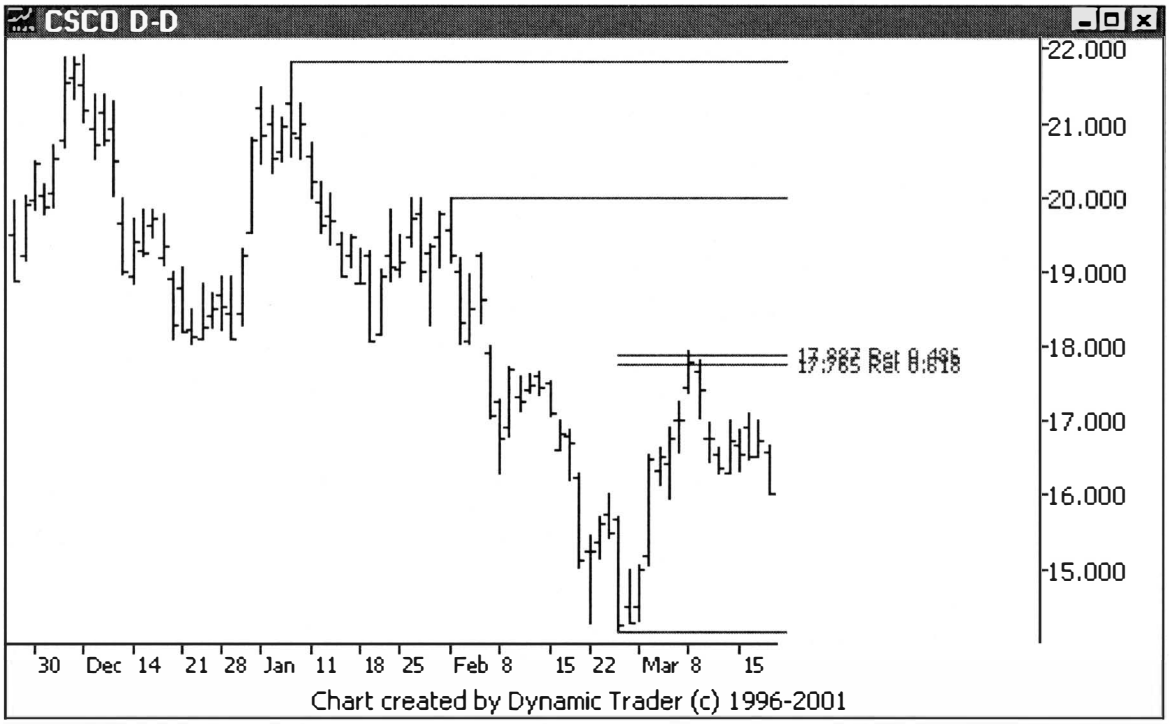
**Figure 9.3**




What we see, in fact, is that these two retracement values are extremely close to each other, only about ten cents apart. They are so close it's difficult to read the labels on the chart. This is something one has to get used to, since the tighter the group is, the harder it becomes to read the labels.

Let's add a few more numbers to this example to fill out this grouping. First let's back up the chart in figure 9.3 a bit so we can see where this downtrend started. See figure 9.4.

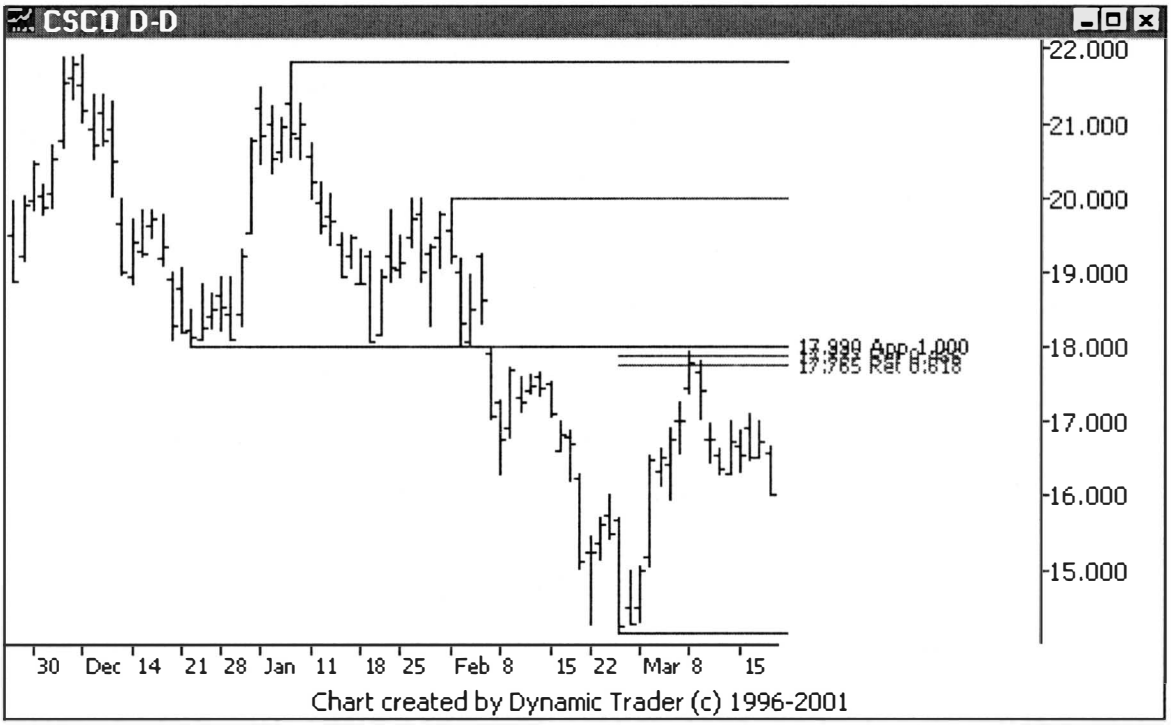
**Figure 9.4**




Now, if I were a reader, the first question I would have at this point is, "That's just about a double top, so what difference does that make to our calculations? The starting point is just about the same." This is a good question, but it misses something important in the chart, something that frequently is overlooked when analyzing charts. Before the move finally continued down, the issue did a 'retest' of the high. What is important to me is how far the issue went down before the retest.

This is important to me because it sets up the first countertrend (pullback) to the new downtrend. With this countertrend move I can calculate proportional moves to add in for my groupings. Let's add in a 1.000 move into our current grouping of two numbers. In other words, let's see where a move equal in size to the first pullback would put us for this move. See figure 9.5.

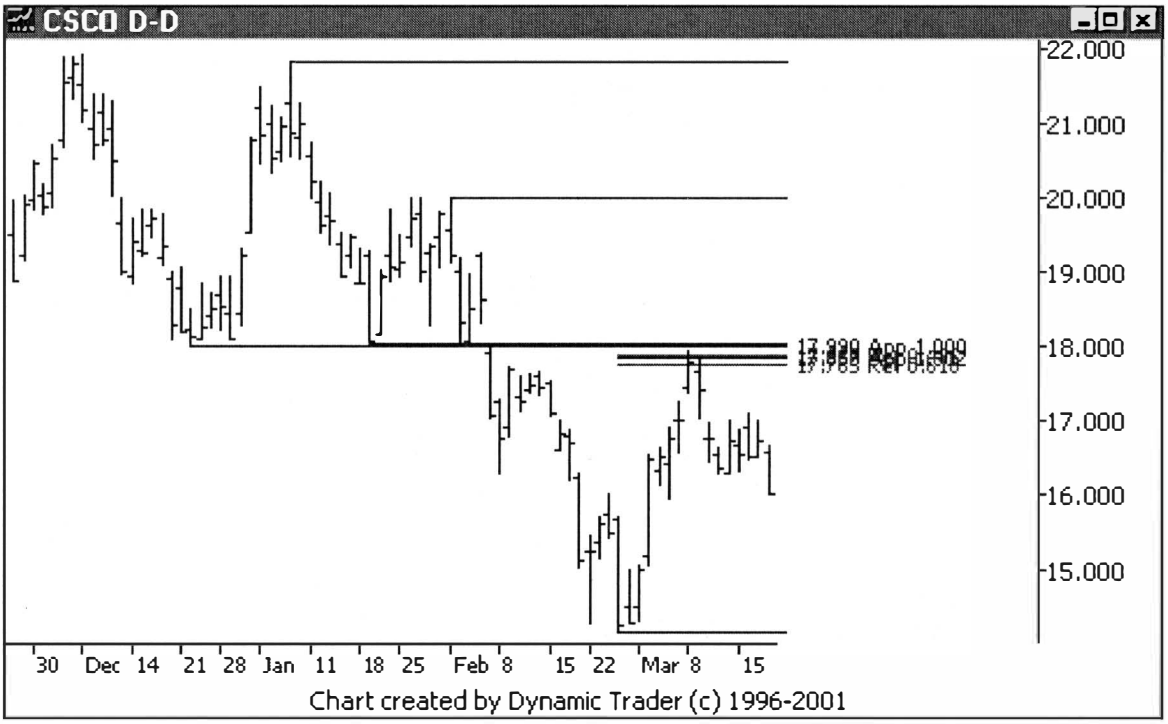
**Figure 9.5**




This equal countertrend move put us right in the same area as our two previous numbers. The concept of the grouping should be starting to become evident to you at this point. Also worthy of note is how the new number also happened to fall exactly on the same price point as the turning point of the first swing-low (which occurred on December 24). Look at the chart and see how many times this area was tested and how important this price zone is. In a classical sense this would be a good example of previous support becoming resistance.

Let's also add in a proportional move of the next swing down from the first one that we just did, which as you can see is a smaller swing. See figure 9.6.

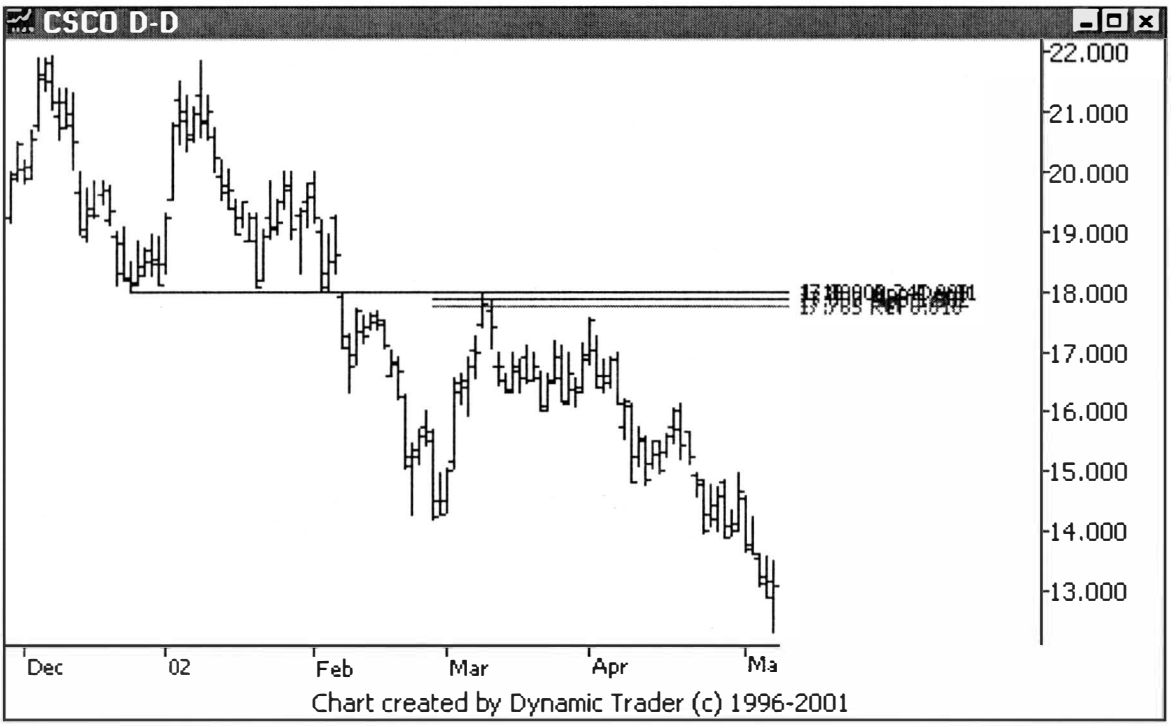
**Figure 9.6**




You are probably asking, 'What just happened?' I added the 1.902 projection of the smaller pullback (from January 22 to February 1) onto the low on February 27, to put one more number into our grouping. This gives us four numbers in a very tight group. It would be wise to consider the swing-low from December 24 for the grouping (as previously mentioned). The line from the first projection calculation on the chart shows this pretty clearly, right at $18.00. That, then, makes five numbers for our grouping.

Let's look at a chart showing a bit more data. This will show how significant this area turned out to be for CSCO. I'll also remove all of the extra lines off the swing-highs and lows that I used in constructing the groupings, for clarity. See figure 9.7.

**Figure 9.7**




This all may seem a little bit confusing at first (a lot confusing??), but don't worry. I had the answers to this one before I started. This is not how I actually construct these groupings from scratch. If it were, the question would be 'How in the heck did he know to do a 1.902 projection on that one pullback', and so on. You can't know that by looking, although you can get pretty good at 'guestimating' when you do this a lot.

I laid this one out step-by-step so you could see the tight grouping as it was formed, one number at a time. In practice, you put all the projections on the chart at once and it's just loaded up. Then you look for the tight groupings and erase off all the lone numbers. The idea is to find charts that have obvious groupings.

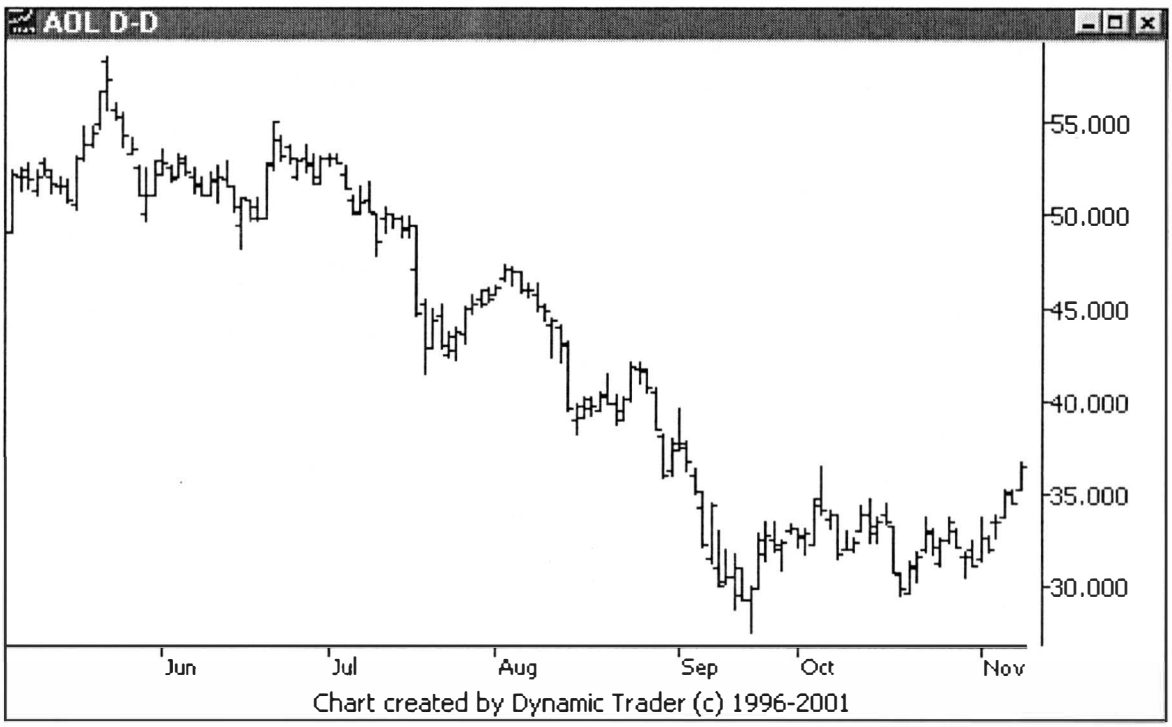
This concept of the harmonics of multiple swings overlapping allows us to use any and all of the swings we choose to use for our calculations, and most of the time some fairly tight, clear groupings will appear. It wouldn't be of much help if we just got a spread out mishmash of numbers. If that does happen, I generally refer to that issue as 'not very harmonic' and simply look for issues that tend to give tight groupings.

Let's go ahead and construct some various groupings. As just mentioned, I find the best way to do this is to put everything sensible I can on the chart, and see if some areas stand out. I then remove numbers that are not in a clear grouping, until I have a few very distinct, tight groupings left. These are the zones where I will dial down to a smaller timeframe and look at to consider a trade. The next chapter will go into detail on trading techniques. For now, let's just concentrate on constructing groupings.

I hope the way I present the construction process will be clear to the reader. I take the approach of presenting lots of charts in sequence as I add more and more retracements, projections and so on. At some point the chart may look like a mess, but hopefully some groupings will stand out. I will then weed out the loners and what is left should look pretty good. I will explain what I am doing and why, step by step, as I proceed.

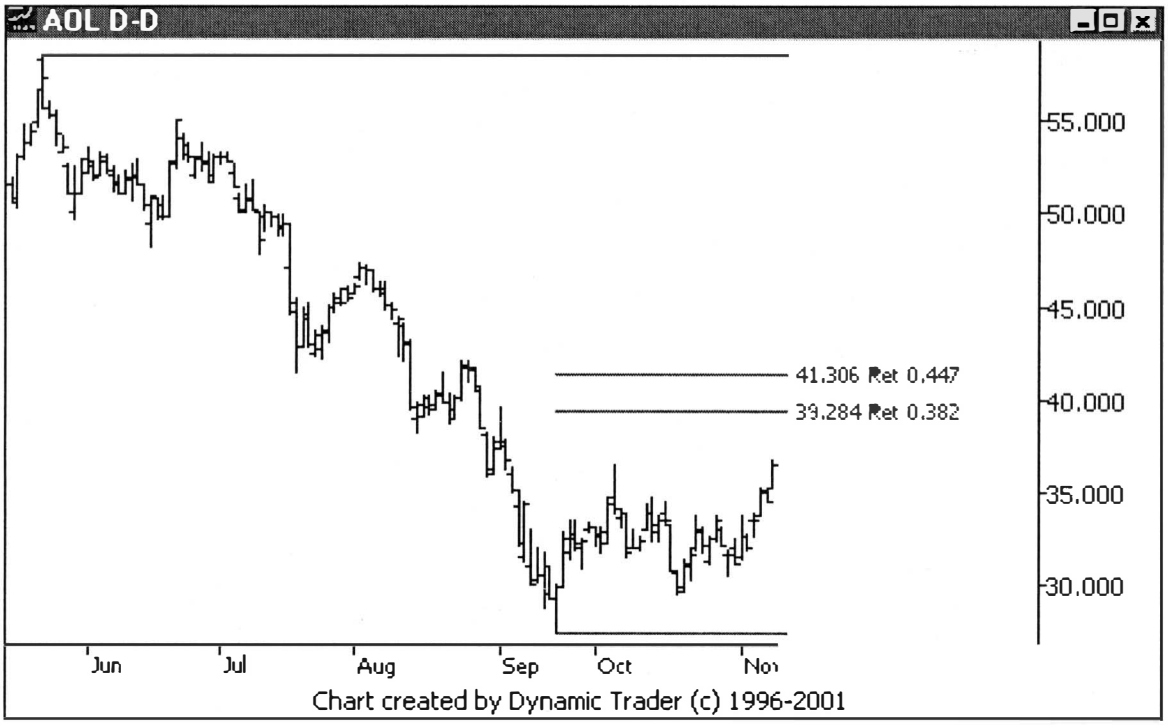
Let's look at AOL on a daily chart. The issue is in a strong downtrend and is making a correction that is greater in size than the previous corrections in the downtrend. This larger correction may imply the downtrend has ended, or it may be that a larger correction is in order and the downtrend will resume once the correction has run its course. See figure 9.8.

**Figure 9.8**



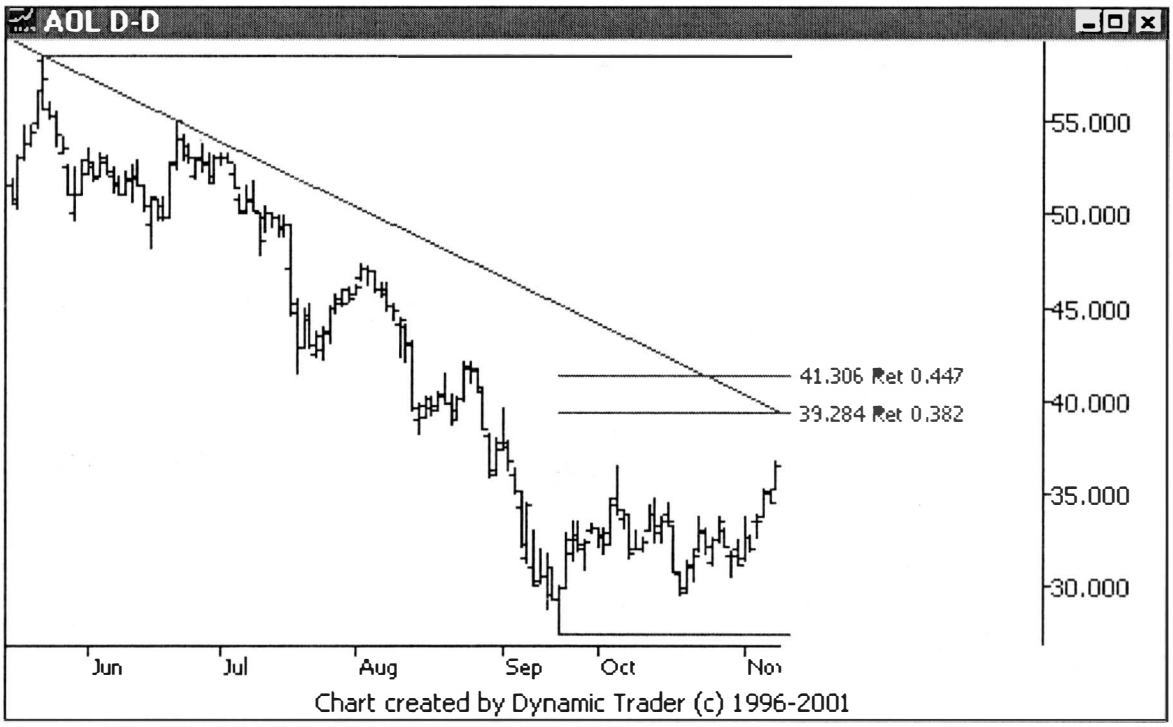

If we plan to play for the downtrend continuation, we need to construct a grouping where the countertrend correction may end. Let's start with a few retracements off the top. Personally, I prefer to take trades in strong trends when the pullback is at least a .382, but not greater than a .447. This is not to say that I won't take trades where the pullback is .236 or even less, but my preference is in the .382-.447 range. So let's put a .382 and a .447 on the chart. See figure 9.9.

**Figure 9.9**



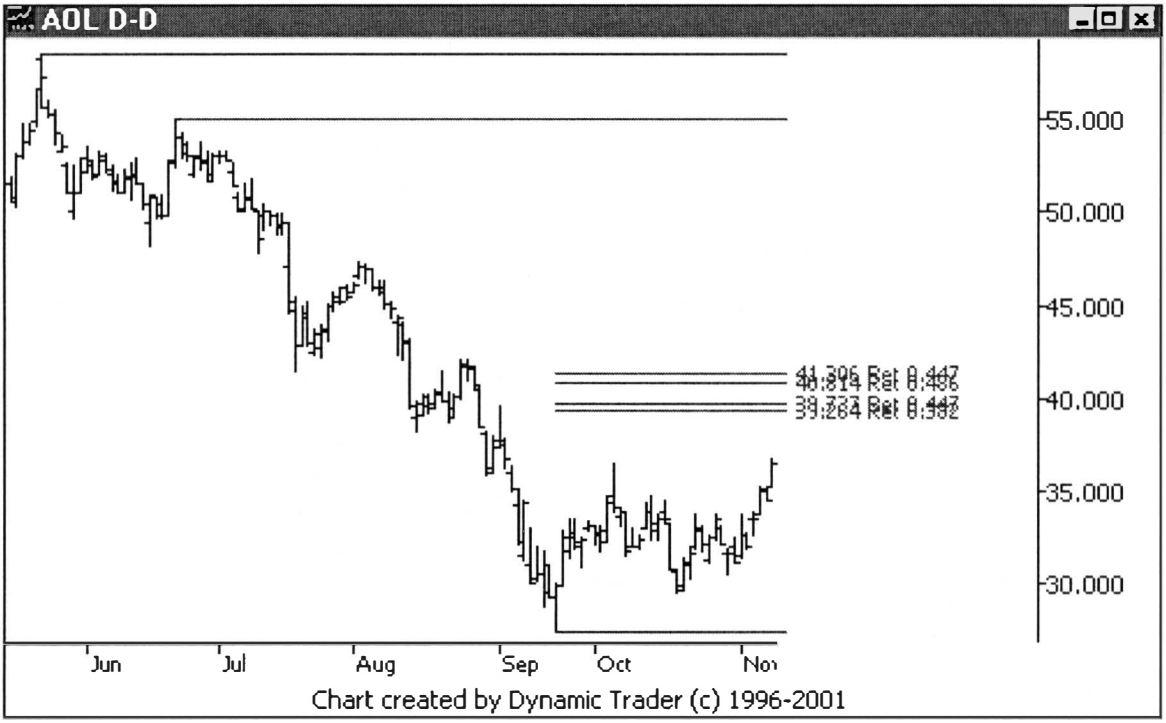

This is our core area and any additional numbers should be somewhere in this general area. I will try to avoid adding any numbers too far out of this area, to avoid making a chart that is laden with information that I won't be using. Also note that, if a trendline is added in, it goes right through this general zone. This shows me that if this area were exceeded to any great extent, I would consider the trend to be either changed, or too uncertain to trade. See figure 9.10.

**Figure 9.10**



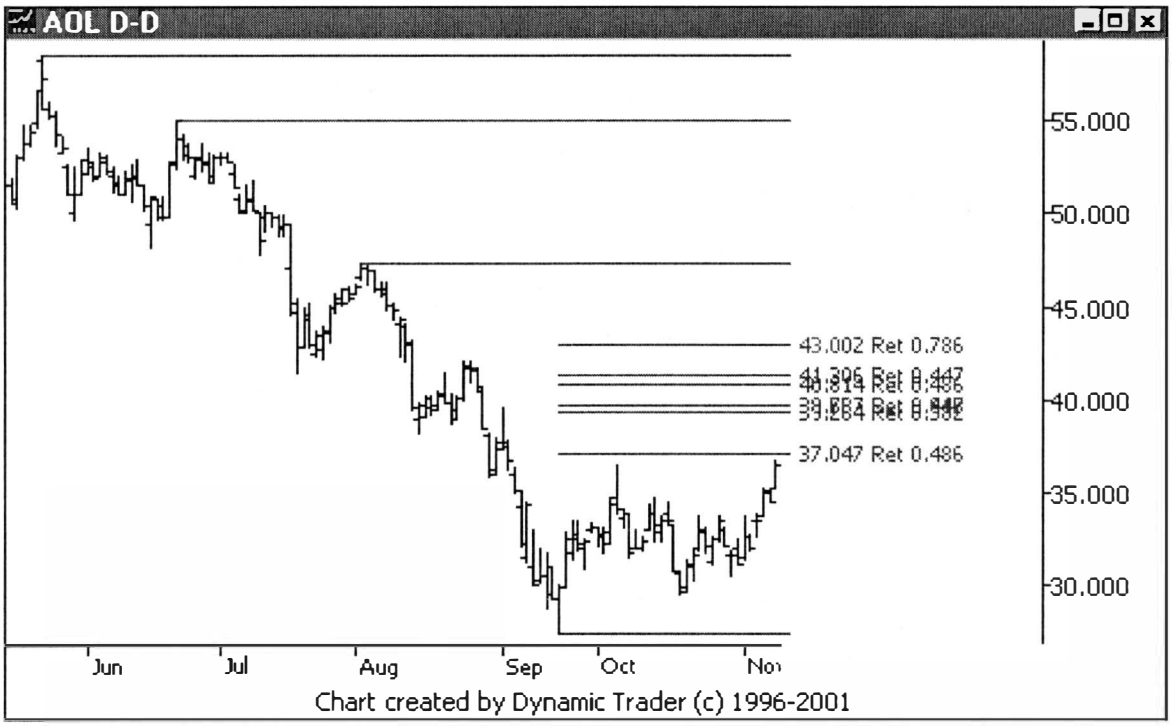

Now we move down to the next swing-high (on June 21) for our next point to key off of. Since this move down to the low on September 21 is less than the move down off the top, we should choose retracements to add that are slightly greater than what we used off the top, in order to keep us in the same area. Considering we started with .382 and .447, let's try .447 and .486 for this next addition. See figure 9.11.

**Figure 9.11**



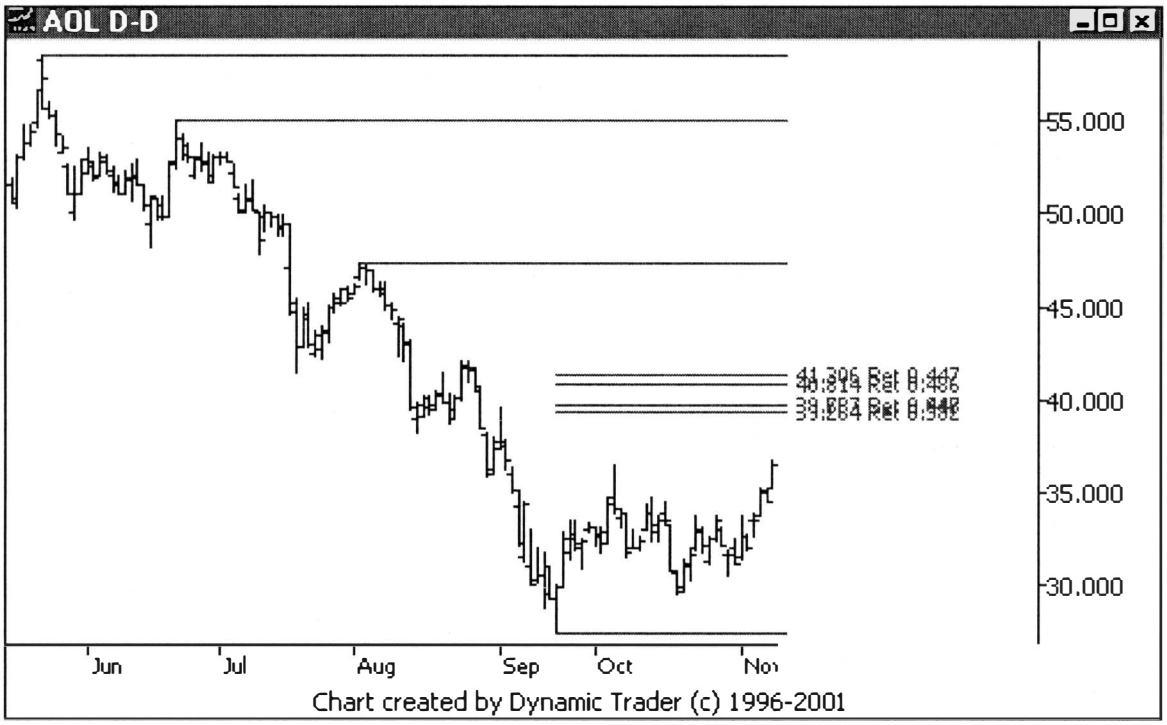

This choice of retracements lines up quite well with the two retracements we already have on the chart, so let's continue on. Let's add retracements off the next swing-high as we work our way down the downtrend. Now my eye tells me that the groupings so far are just about at a .618 retracement from this next swing-high on August 2. The ability for me to spot this right off has to do with the level of experience I have constructing these types of groupings. Say your eye hasn't reached that point. Let's just go ahead and add .486, .618 and .786, assuming we aren't sure what to do at this point. See figure 9.12.

**Figure 9.12**



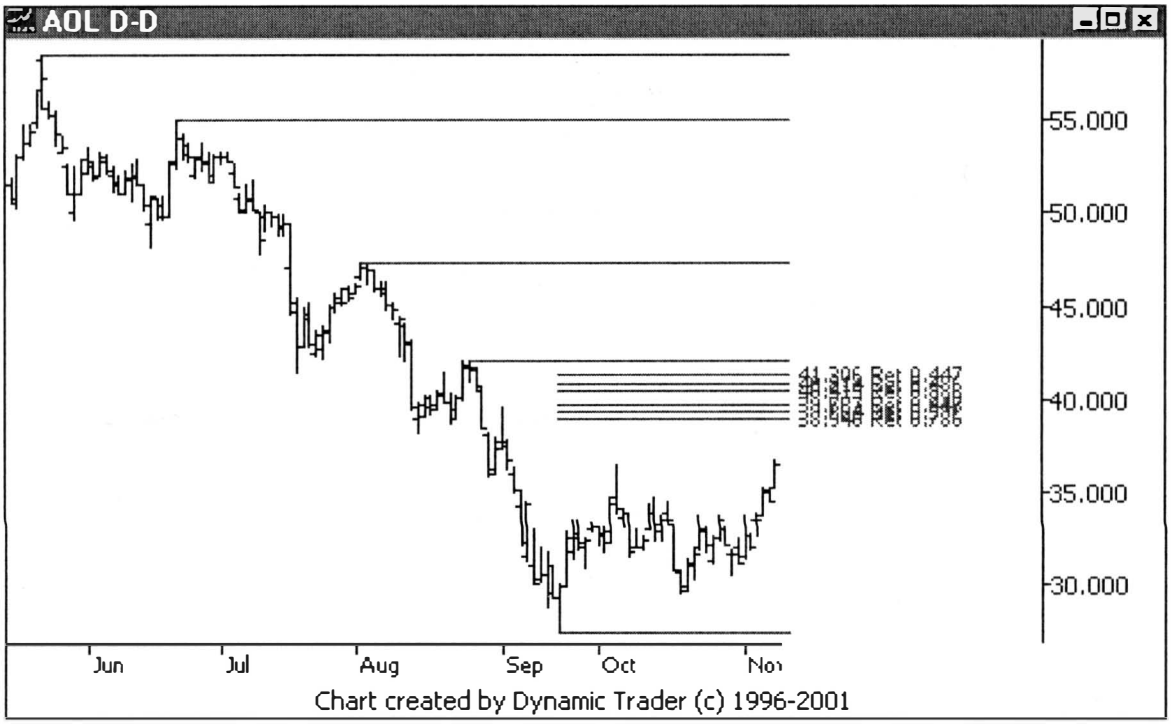

What we see is quite clear. The .486 is well below the area we are looking at, and the .786 is quite a bit above. The .618 is almost impossible to see, as it overlays one of the groupings so exactly. So let's erase off the .486 and .786. Sometimes it's easiest to just add things in, see what happens, and erase off the ones you don't need. See figure 9.13.

**Figure 9.13**




Now we have just one more swing-high on August 27 on our way down the downtrend, so let's add in retracements from there. Again, based on my eyeing the chart and what we have learned from doing the last retracements, I would look to add the .786 and .886 off this swing-high. You can see quite clearly the area we are looking at is just below the swing-high, so these retracements make sense. See figure 9.14.

**Figure 9.14**




Now this looks great. We have two very nice groupings forming and they are close together. Note that the line off the August swing-high is not a part of the groupings (it's just there to show us that we have used that point for one of the retracements).

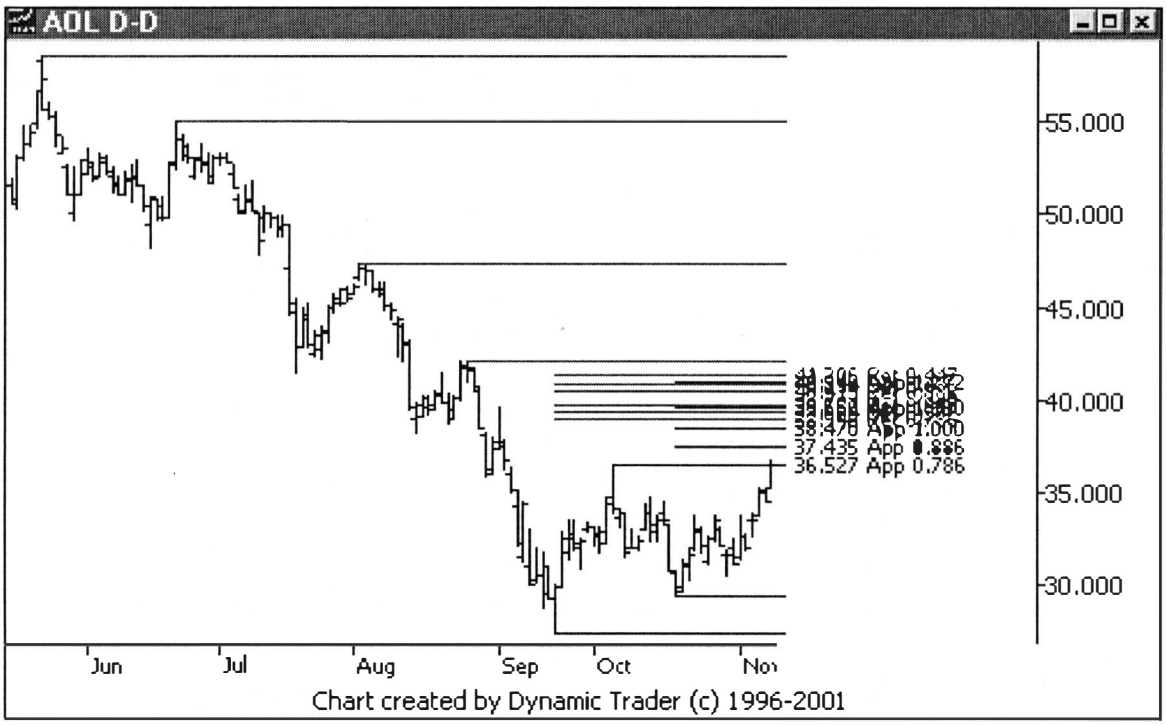
So far, all the prices we have added are retracements. We can now look at some projections. Usually the projections that I use for an established trend are derived from all the previous retracements. In this case, though, we are playing for the end of a larger pullback than all the previous pullbacks. What this means is that we won't be adding in the 1.000 projections of all these previous pullbacks, since they will be too small.

What does that leave us? Well, we can add in other Fibonacci ratios of the previous pullbacks. Or, we can look at the pullback we are creating the grouping for, and look for clues there. The first thing that I see with this pullback is that it has a familiar form, one of a simple *abc* correction. This is a correction where an initial move is made, a pullback occurs, and then the correction finishes, usually with a move equal, or close to equal, to the initial

*a* leg. If the *c* leg doesn't equal the *a* leg, it is frequently a Fibonacci ratio of the *a* leg, most commonly a .786, .886, 1.13, or 1.272 ratio.

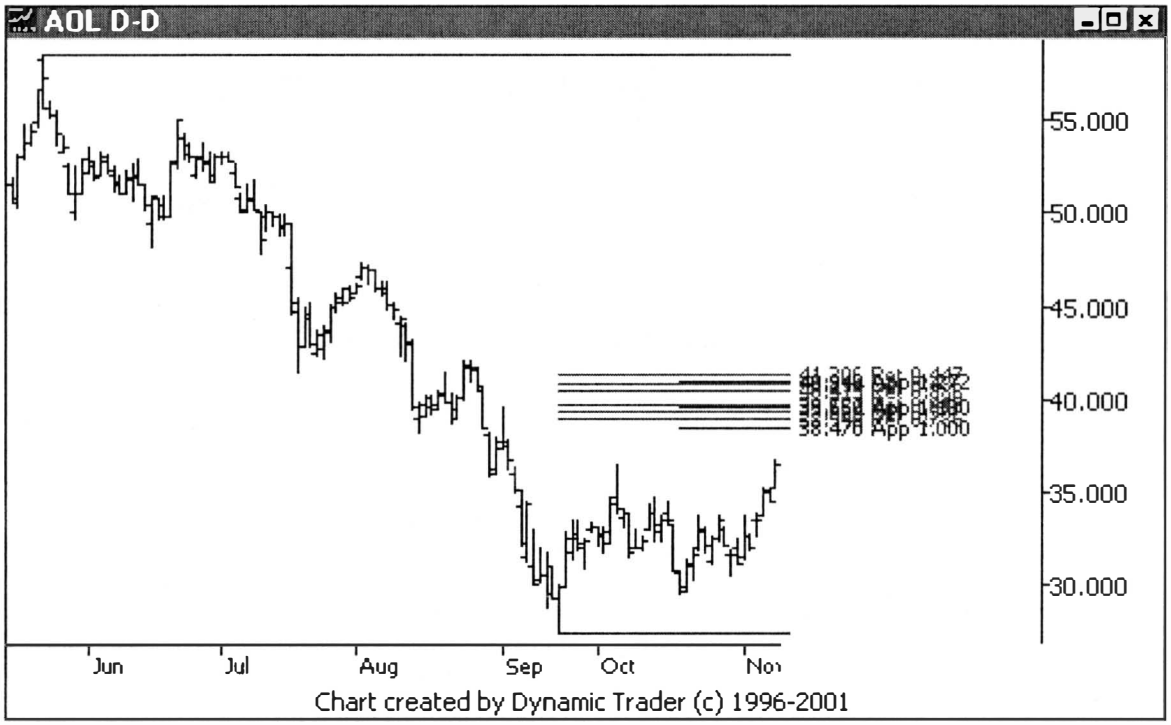
So, let's add in projections for all these Fibonacci ratios, as well as the 1.000. See figure 9.15.

**Figure 9.15**



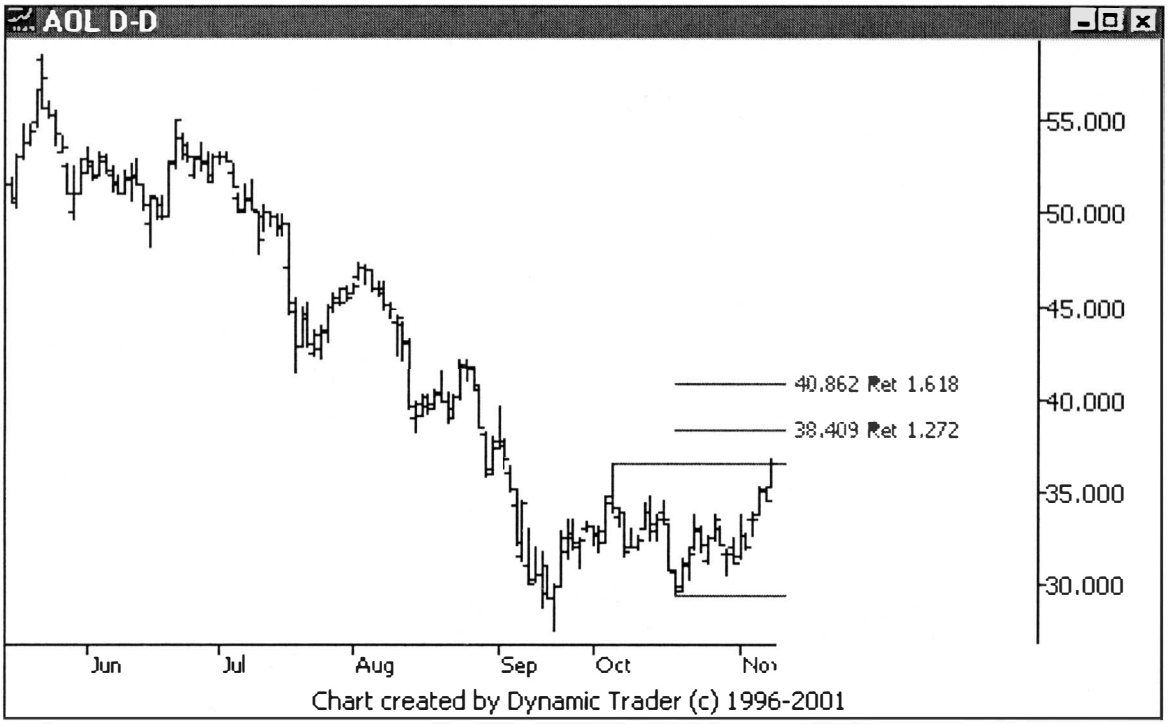

This continues to look good. The two smallest projections are below the groupings, so let's erase them. The three remaining projections (the 1.000, 1.13, and 1.272) fall right in our two current groupings. I'll also, for clarity, erase the lines showing the swing-high points that the retracements were keyed off of. See figure 9.16.

**Figure 9.16**



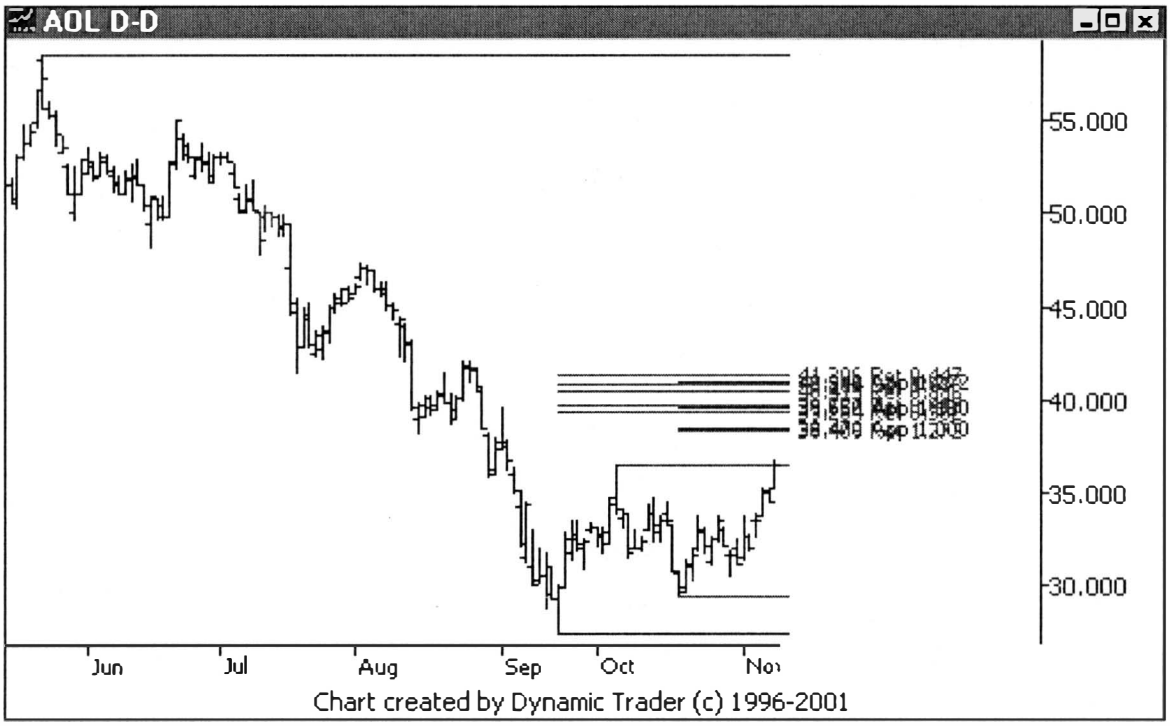

There's another thing we can do that we want to consider whenever we have an *abc* type pullback, and that's an external retracement of the pullback that forms the *b* leg. To make this procedure less confusing to follow, first I'll show just this external retracement on the chart by itself, so you can see what I'm doing. Then I'll add it onto the chart with the groupings. See figure 9.17.

**Figure 9.17**




I used the most common 1.272 and 1.618 external retracements in figure 9.17. Let's put these on the charts with the groupings and see how they fit in. See figure 9.18.

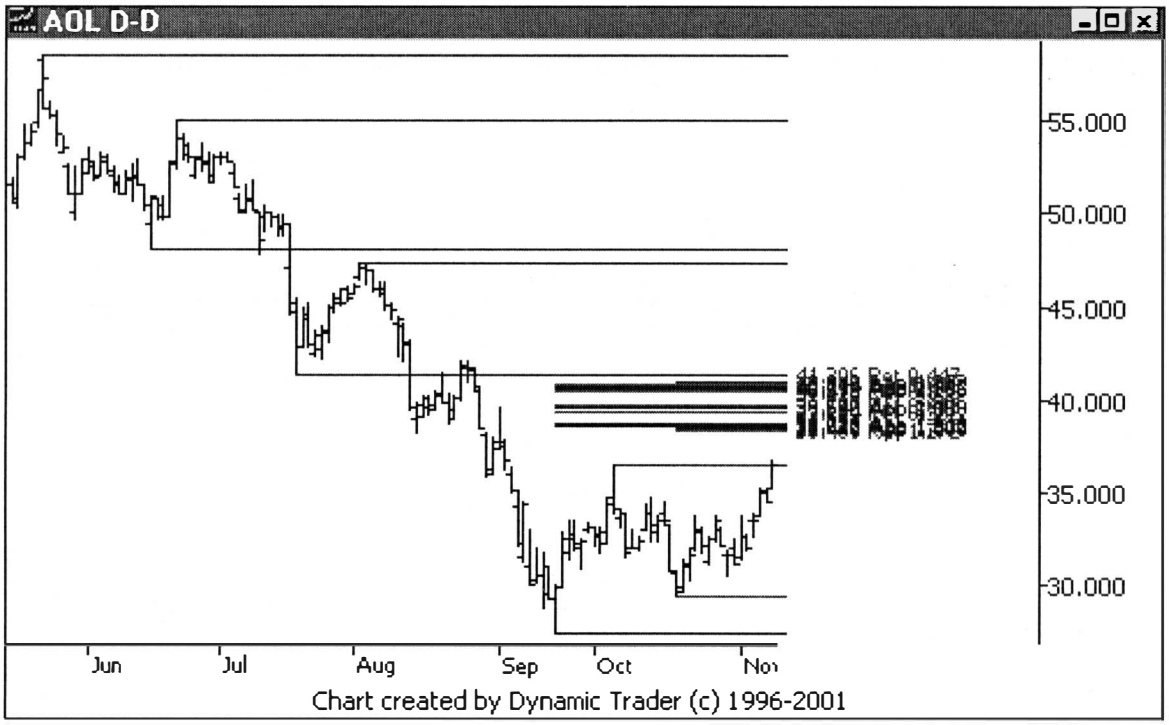
**Figure 9.18**




An interesting thing has happened. We now have three very tight groupings forming. At this point we could stop since we have quite a varied assortment of retracements and projections, and very nice, tight zones. If I were going to trade this issue, I would be satisfied at this point and now dial it down to a lower timeframe and look for an entry trigger.

Since this is a teaching example, I will add a few more things in, just to further drive home the point of how the harmonics frequently overlap to a great degree. I will skip a few steps here and just present the additions. I'm going to add in 1.618 and 1.902 projections of the first retracement (June 15 low to June 21 high) and 2.058 and 2.236 projections of the second retracement (July 19 low to August 2 high). See figure 9.19.

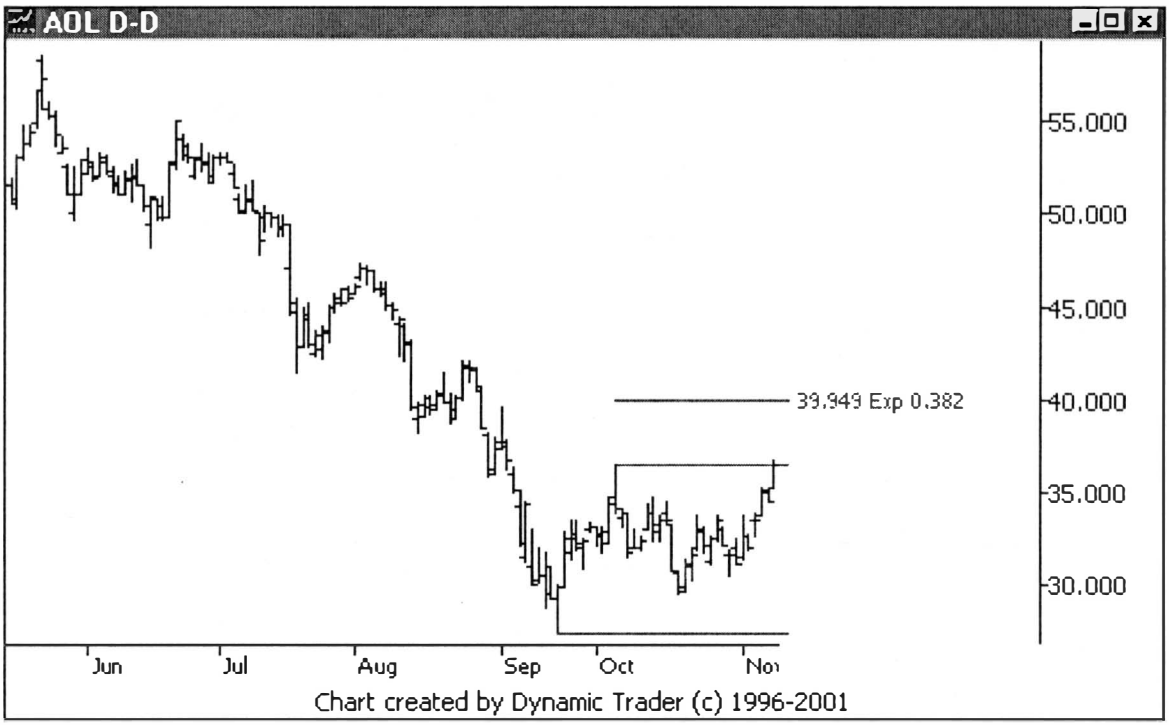
**Figure 9.19**




Notice what is happening? They are just adding in right over the other prices. We have three very distinct groupings, and a lot of evidence that the moves this issue makes are in many ways depending on the previous moves it has already made. Now, this is in no way a guarantee where the issue will trade in the future, but it seems to point to areas we want to watch closely in our trading.

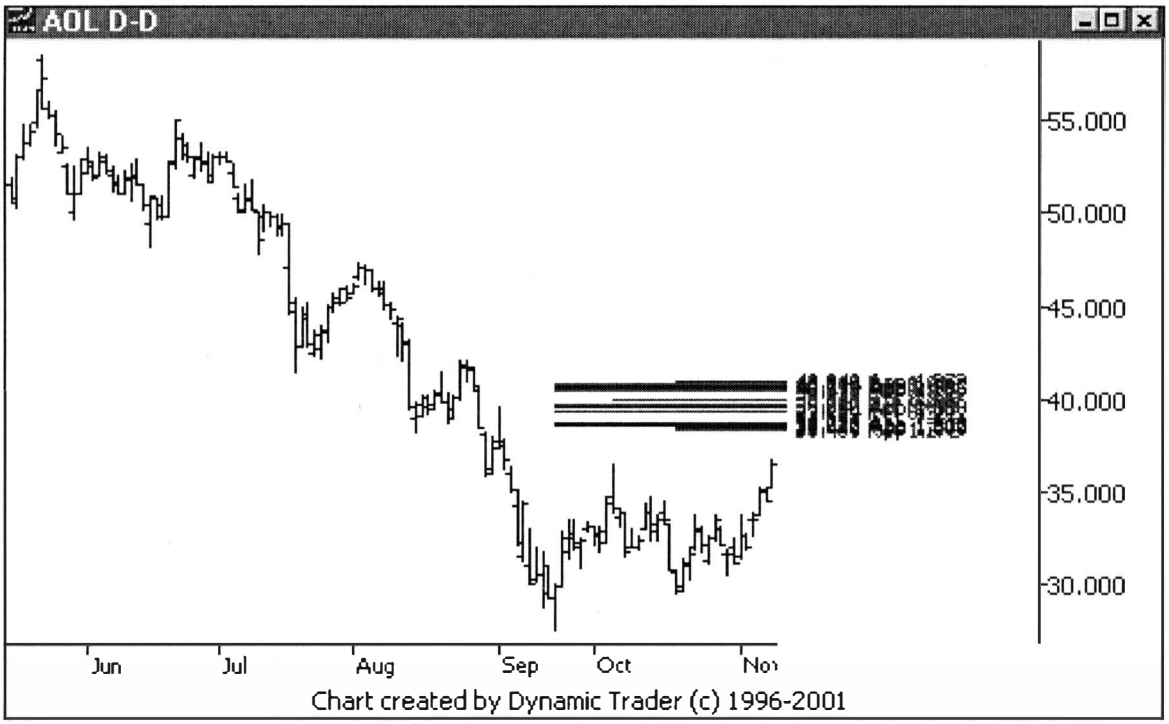
Now, as promised in Chapter 5, I will add in an example of an expansion. I will add the .382 expansion in, but first let me present it on a chart by itself. How did I know to try the .382 expansion? Partly experience and eyeing the chart, and partly, I cheated and tried a few first to make the example easy on the reader. See figure 9.20.

**Figure 9.20**




Let's add it into the mix and see how it fits. For clarity, I'll also remove the lines on the swing points used for the calculations. See figure 9.21.

**Figure 9.21**




This is the final version with three nice tight groupings, having almost endless overlapping prices. If I were looking to trade this issue, as I mentioned before, I would have stopped at figure 9.18, since it contained all I needed at that point. Continuing on hasn't provided me with anything additional that I really need to consider a trade, but it has served as quite a good teaching example, and has added in some reinforcement.

So, what happens now? At this point I dial it down to a lower timeframe and look for an entry. (I will cover this in more detail in the next chapter on trading techniques.) Let's finish this with a simple entry strategy on a lower timeframe, and see how this one played out.

First, let's dial down to a 60-minute chart. If the daily chart were the traded timeframe, I would normally look for a trigger on a chart that has three to five times the data. For stocks that trade six and a half hours a day, that would be in the range of the 78 to 130-minute bars. The most commonly used bars in that range are the 90-minute and 120-minute bars, but the 60-minute is a very popular chart.

You might be thinking, well, let's pick the 90-minute because its use is perhaps less common than the 60-minute. That's a good line of reasoning. The choice of timeframes here is really a personal preference based on experience to a great degree. I like to use the additional information I get from the 60-minute chart, so I'll choose the 60-minute for this example. You should choose whatever you feel the most comfortable with. See figure 9.22.

**Figure 9.22**




Here we have the 60-minute chart cut off at exactly the same position as the previous daily charts in figures 9.8-9.21. The issue is headed into the zone and beginning to uptrend quite nicely. Although I don't show them on the 60-minute chart, the groupings are in the area of approximately $38.40 up to just under $41.00. You can go through the extra work of putting all the groupings on the lower timeframe chart if you wish, or just watch the larger, traded timeframe chart (in this case the daily), to see where the issue is with respect to the groupings. I usually do the latter.

Once the issue enters the lower end of this zone I will begin looking for an entry signal on the 60-minute chart. In this case I'm going to look to enter on

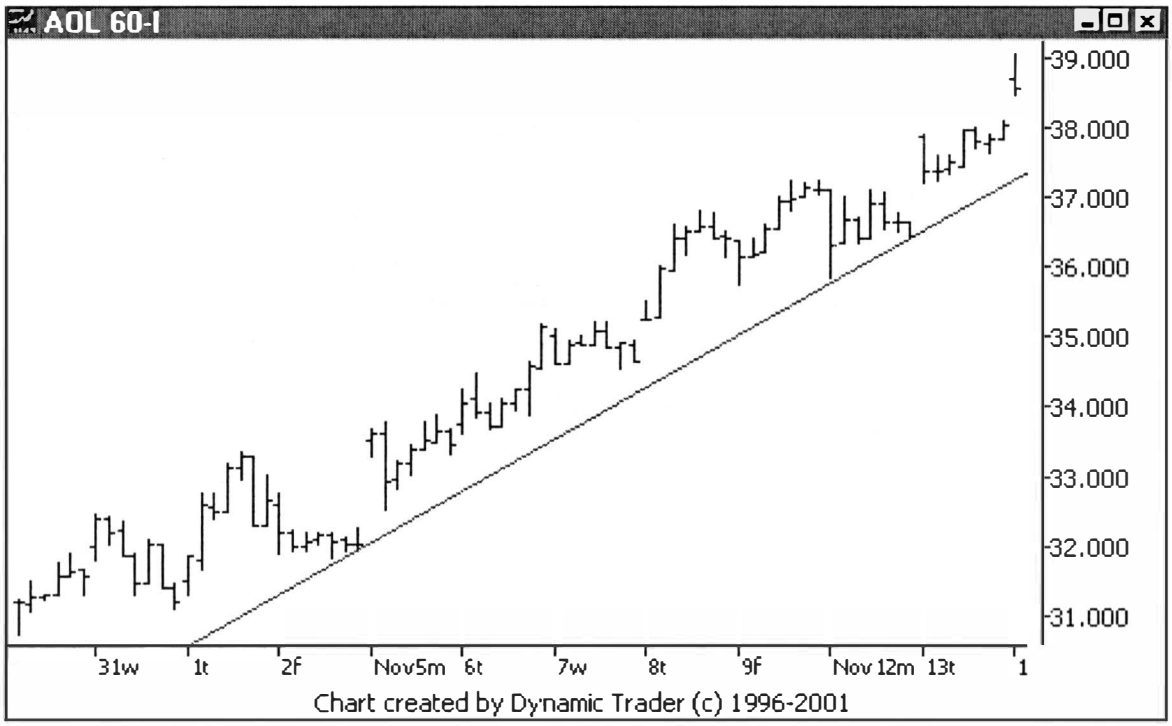
a trendline violation. (Remember, as I stated before, I'm not trying to teach specific entry techniques here. I picked the trendline violation to vary the technique from the last example and because it's a technique, which is, in my opinion, well suited to the smooth trend that is developing in this issue. Traders should decide, on an individual basis, what specific techniques they want to use to trigger them into the trade.) Let's look at the 60-minute as AOL enters the first grouping, with a trendline drawn in. See figure 9.23.

**Figure 9.23**




The chart has a bit too much data for clarity, but I wanted to show the overall perspective off of the bottom. Let's expand the chart out a bit and focus on the run into the groupings. See figure 9.24.

**Figure 9.24**




Keep in mind, the groupings are right in this area from approximately $38.40 up to just under $41.00. If the groupings are to hold and a reversal back to the downtrend is to take place, it should happen soon. Let's move forward a few bars. See figures 9.25 and 9.26, showing the 60-minute and the daily charts.

**Figure 9.25**

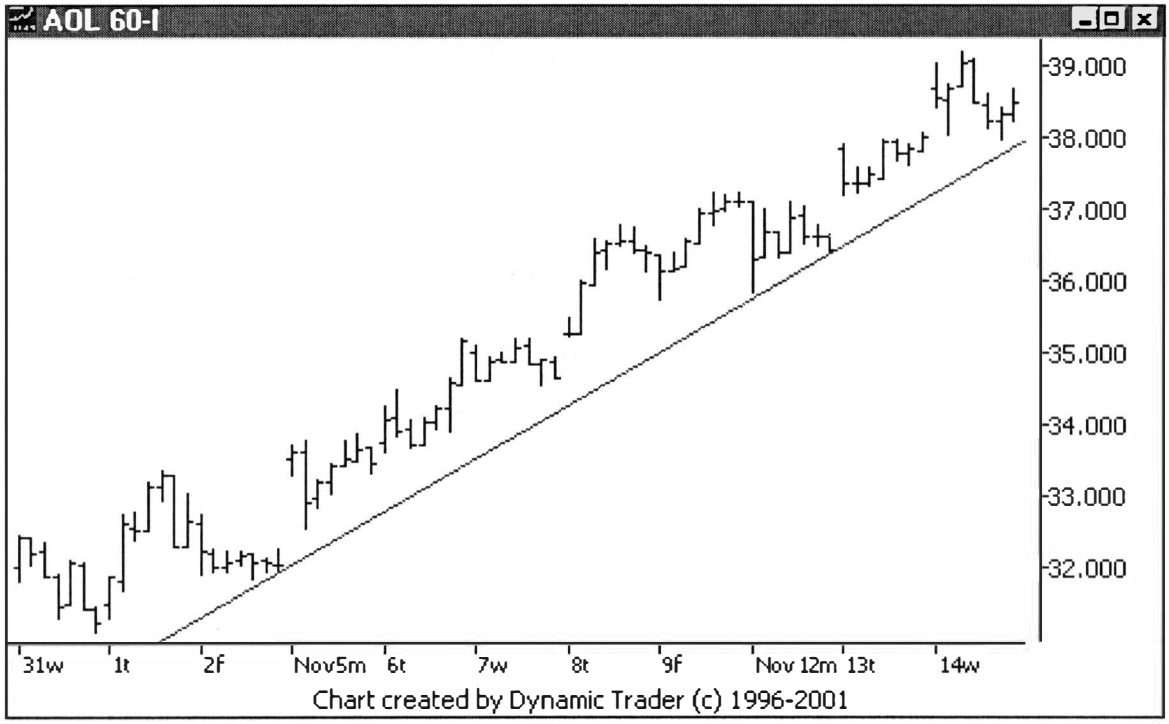
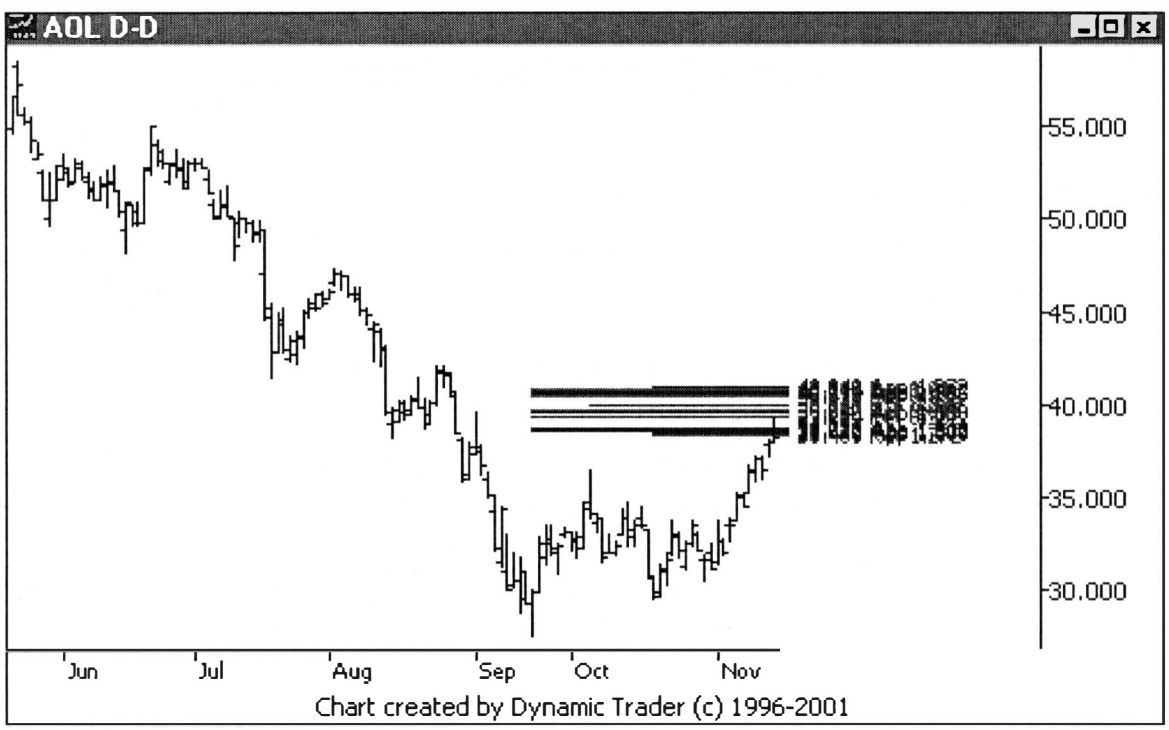



**Figure 9.26**



At this point we see the trendline still intact in figure 9.25. The price came down to test the line and appears to be reversing back up. We are entering right into the middle grouping as seen on the daily chart, figure 9.26. Let's go forward one more bar on the 60-minute chart. See figure 9.27.

**Figure 9.27**




At this point we have a trendline violation and a violation at the same time of a minor swing-low. This would trigger the trade. As the bar completes we see a relatively strong close. Stops would be set, the trade is now in progress, and all we can do is see how it plays out. I won't mention possible stop placement or trade management, as they are entire topics unto themselves, as are specific entry techniques. I will likely write a book on this very topic, but now isn't the time for that type of discussion. My purpose here is to show you how to construct places where you might decide to take a trade. Let's see how this one plays out. See figure 9.28.

**Figure 9.28**




It turns out, that the bar that broke the trendline and then closed strong was only a temporary show of strength, as AOL then continued to sell off. Take a look at the daily chart, though, and look at what happened longer term. The chart is quite compressed to include all of the pertinent action that was to follow. The three groupings can be clearly seen on the chart. See figure 9.29.

**Figure 9.29**

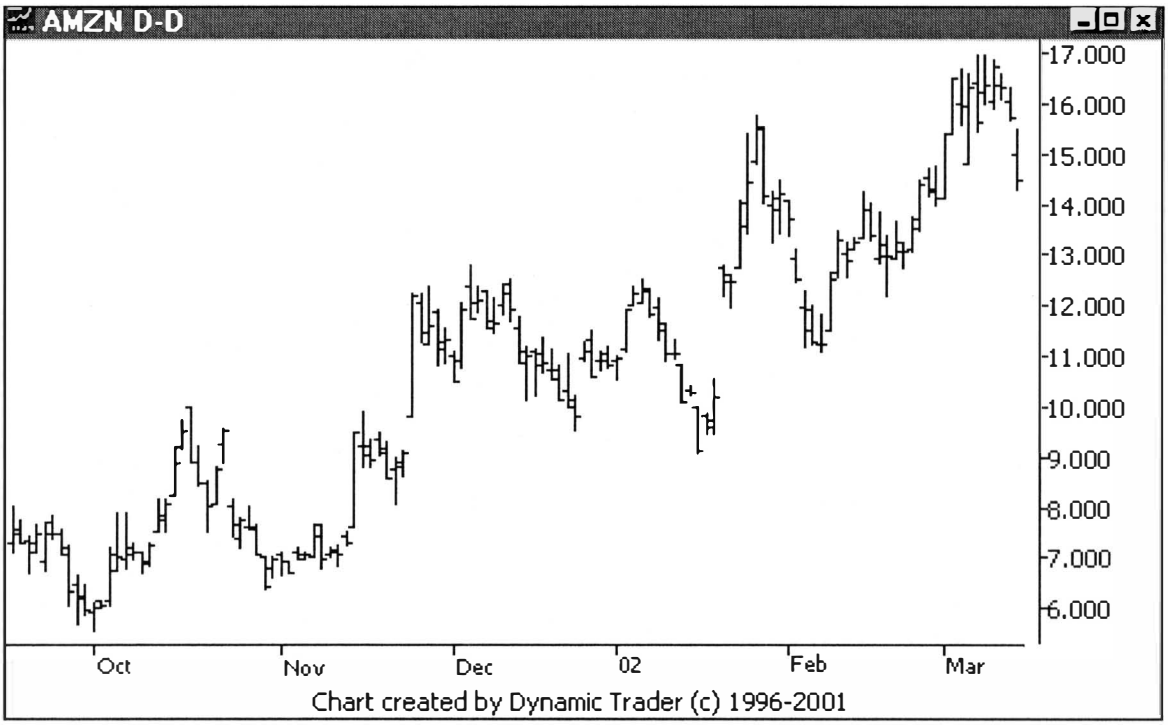



Although this construction took quite awhile to work our way through, it clearly demonstrates the major concepts in a step-by-step fashion. As you gain experience and your eye becomes trained as to approximate price levels for retracements and projections, the process will go much faster.

It's good to look at examples that don't quite fit the mold so well. Let's try another example, one that doesn't work out quite as easily as the last example, and requires some judgment at many of the steps. We'll start with a daily chart of AMZN.

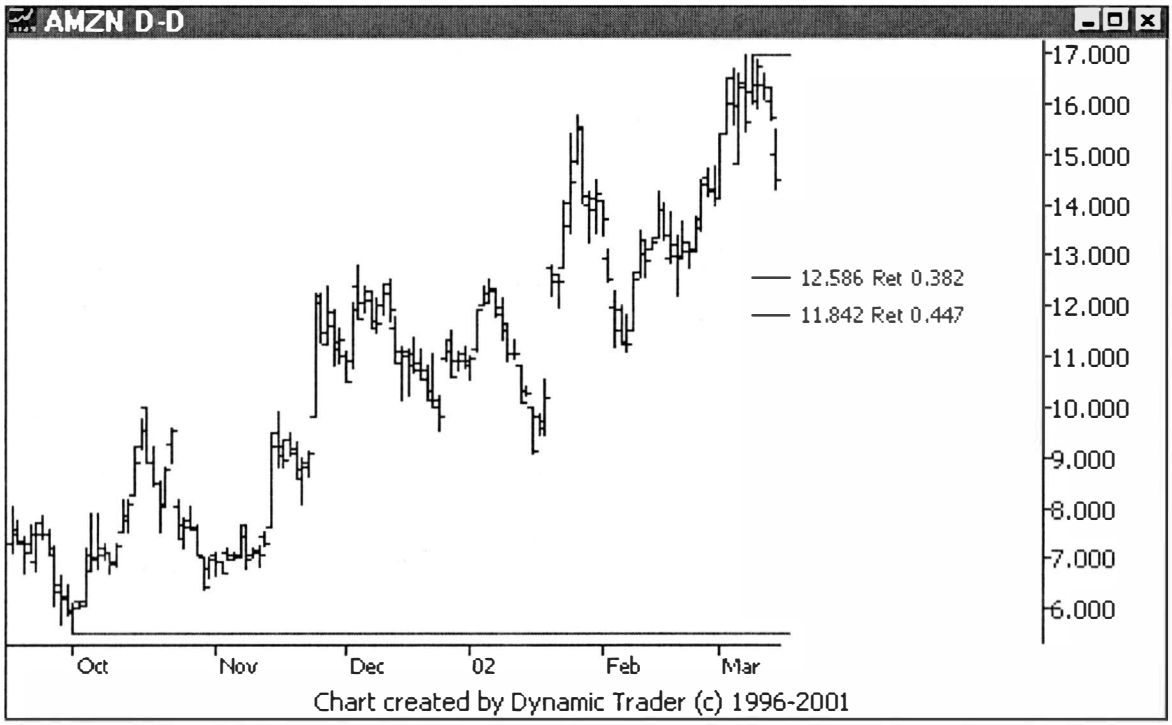
Note right off how choppy AMZN is trading. At this point AMZN has been in a strong oscillating uptrend, and I'd like to find a trade to get in on the trend. I want to find an area where a pullback might end. Here's the chart of what I'm looking at as a pullback starts. See figure 9.30.

**Figure 9.30**



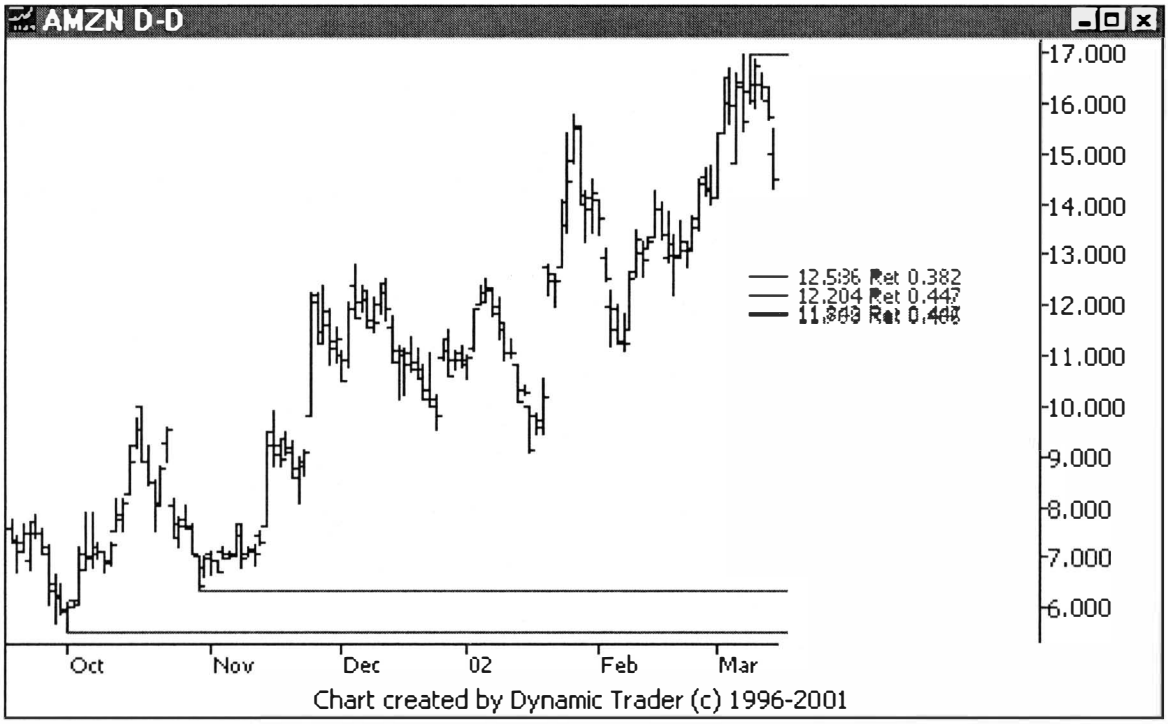

I will first add in some retracements starting from the low that marks the beginning of the uptrend. As mentioned in the last example, I prefer to take trades in strong trends when the pullback is at least a .382 retracement, but not greater than a .447 retracement. In this case I won't use any retracements larger than .447 off the bottom, since this is a strong uptrend, and anything larger than .447 would violate a trendline, giving me cause to wonder if the trend has changed. I also like to use a regression channel (not shown) on a stock in an oscillating trend such as this, to get an idea of the deepest retracement I would consider. See figure 9.31.

**Figure 9.31**




Next, I'll add some retracements off the October 30 swing-low. I'll move up to .447 and .486 after making a good estimate, eyeing the chart, and knowing I want to use larger retracement levels than those I have just used. Then I'll see how they look. See Figure 9.32.

**Figure 9.32**



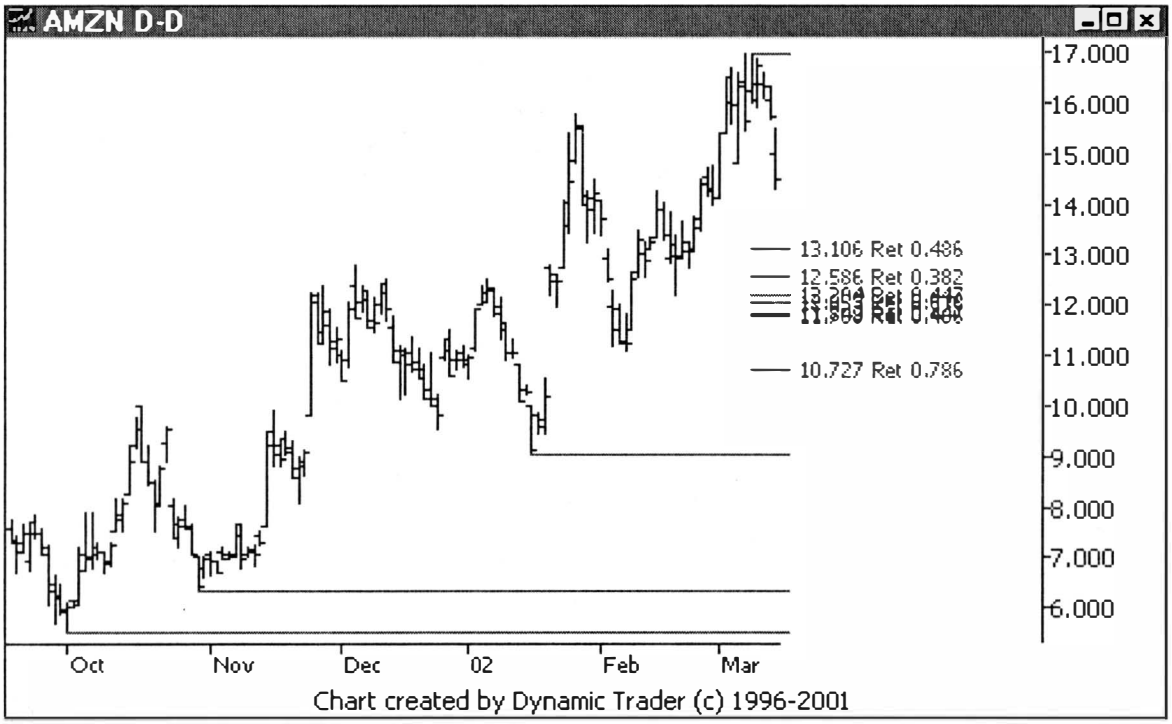

This addition fits quite well with the existing retracements, so I chose well. Let's move up to the next swing-low. Here's where some judgment comes in, or at least what looks like a decision to be made. Do we use the low on December 24 or the low on January 16?

Since the January 16 low was at a lower price, I consider the low set on December 24 to be part of a correction. In this case quite a nice, uniform *abc* correction. Let's, therefore, key off the January 16 low. Now, what retracements should we add? Remember, we can add all of them if we want to, and erase off the ones that are outside the area we want to look at, or we can make an educated guess and see if we are in the zone.

How do we know we didn't miss any, if we use the educated guess method? The answer is experience. I can see where they fit in the groupings and tell if any nearby retracement choices would be in the zone. If I feel they would be in the zone, I add them, and see. Until you gain that level of 'feel', just add in the ones that are close and see where they fall. I can see the only retracement we will need here is the .618. But let's say you aren't quite as sure at this point. Let's add in the .618, plus the closest retracement below

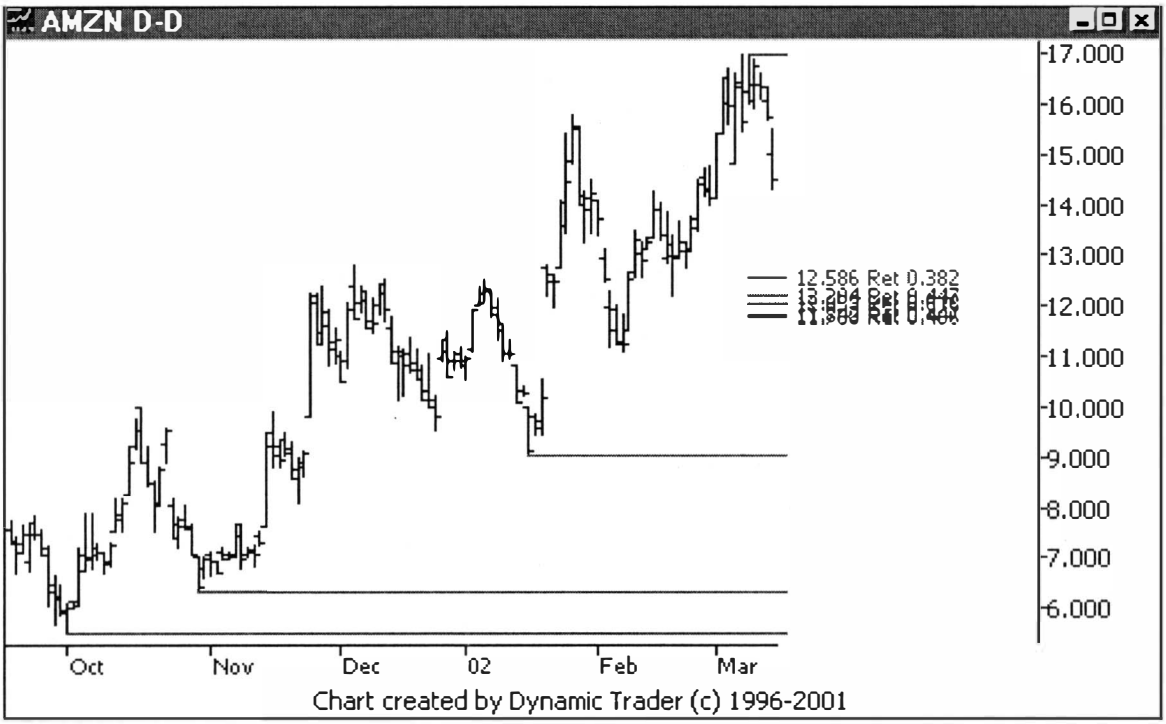
and above. That would be the .486 and the .786. We can always just erase off what we don't need. See figure 9.33.

**Figure 9.33**



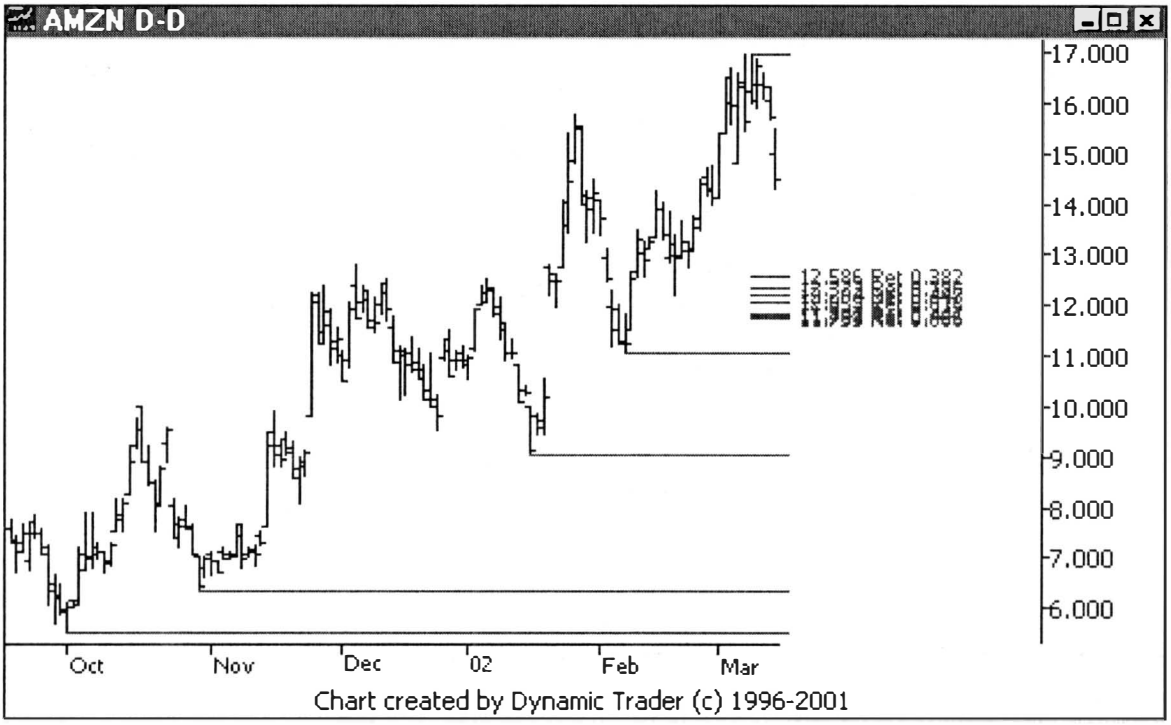

As I expected, the .486 and .786 fall obviously outside our working area, so let's erase them off. This was good practice, though, to see how you can quite easily determine what numbers are reasonable. See figure 9.34.

**Figure 9.34**




At this point, we have some nice-looking areas forming. I won't draw any conclusions, yet, as to whether we have the start of three groupings forming. Let's first add some more into the mix. We have one more significant swing-low on February 7 we can key off of. Our groupings are pretty deep with respect to this swing-low, so I would guess the .786 and .886 retracements are the ones to add. See figure 9.35.

**Figure 9.35**



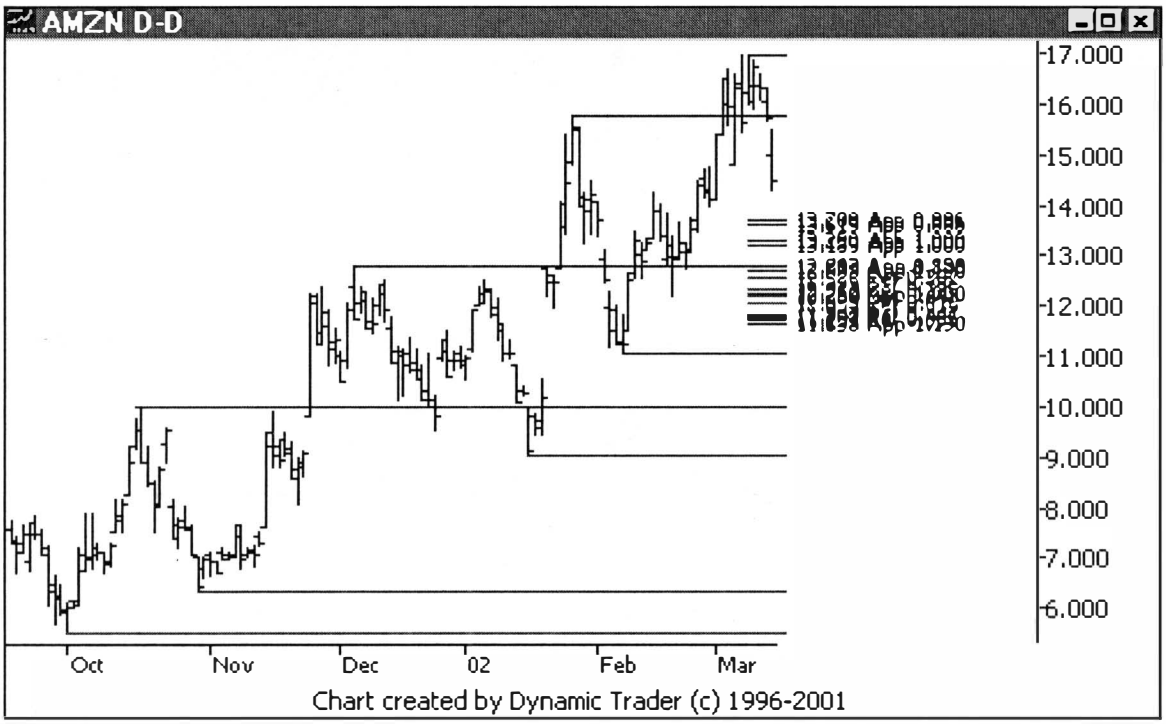

So far, this is shaping up very nicely. Now we are getting to the point where I really start to have fun. As I look at the pullbacks up to this point, I see they are generally quite uniform (as far as how much they are pulling back). I like to look for this when I scan charts looking for trading candidates. I will still consider charts that don't show this characteristic, but when I see it, I usually explore that chart in detail.

Next, I do projections of these pullbacks, creating Fibonacci ratios of each pullback to see what kinds of areas this would put me in off of the last high. What I'm trying to determine is, if the issue has a pullback now that is similar to the previous pullbacks in the trend, where would that put the price? Since I see such uniformity in the previous pullbacks, I'm going to do this next step all in one shot.

I'm going to add the projections keyed off of each of the three major pullbacks in the uptrend so far. I have found that, if the pullbacks are uniform, I want to not only look at the 1.000 projection (the pullback is equal in size to the one I am comparing it to), but also at the .886 and the 1.13 projections. Let's add each of these three projections in, for each of the

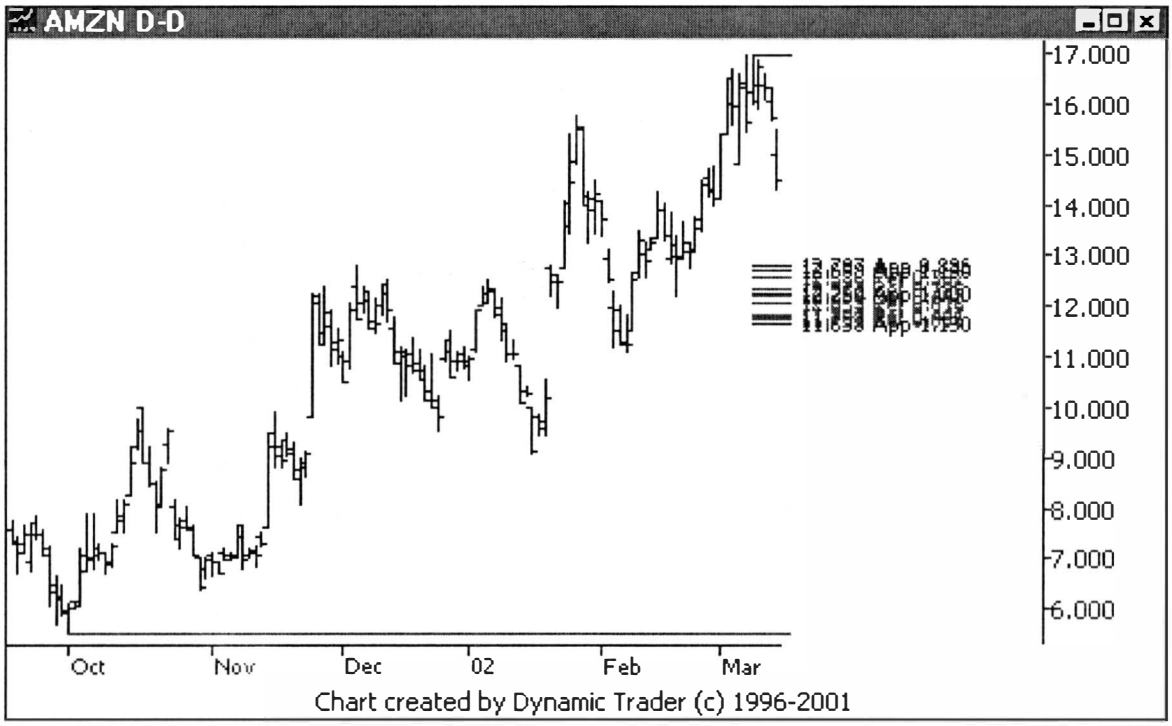
three pullbacks, giving us nine new numbers in one shot. This could create a real mess on the chart, but we'll see. If it does create a mess, we'll erase them off and go one by one. See figure 9.36.

**Figure 9.36**



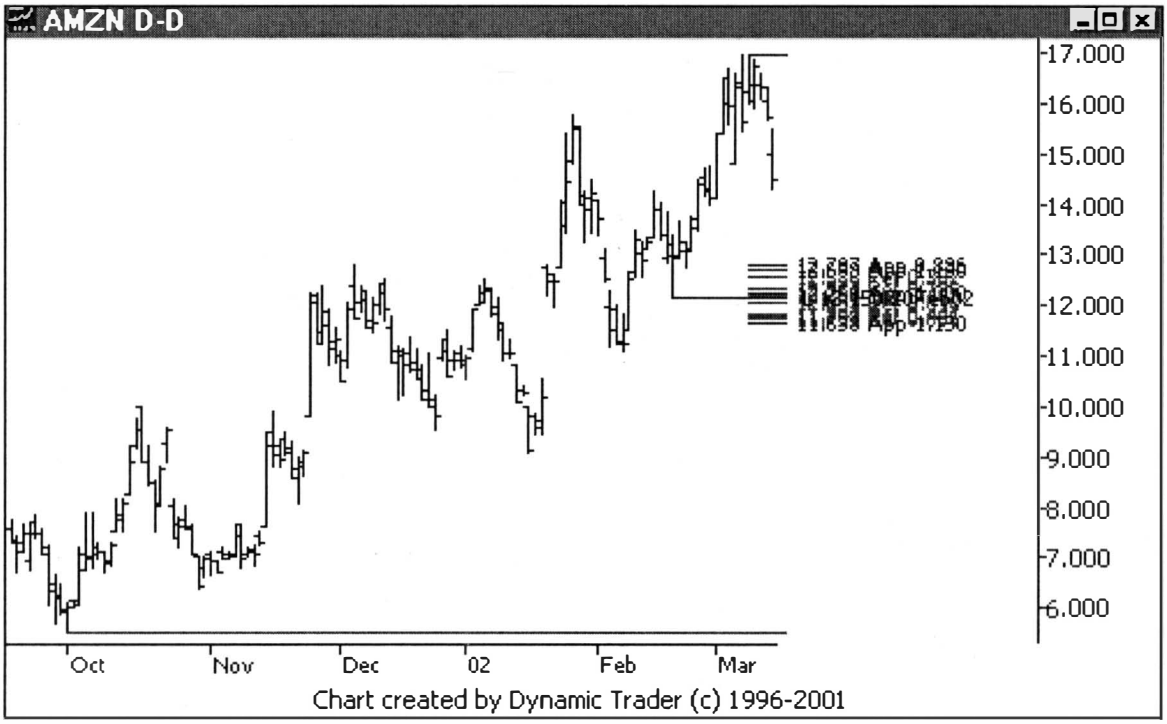

Now, that's amazing to say the least. Not only did we not create a mess, we have some beautiful groupings. Three distinct groupings are now clear in our area of interest, and two new groupings are starting to form up higher. I will leave it as an exercise for the readers to go back, if they want, and see that some of the smaller retracements would in fact land on these new, upper groupings. As nice as these two new beginning groupings look, though, they are above our area of interest, so I will erase them off the chart. For clarity, I will also remove the lines that show the pullbacks used to create the projections. See figure 9.37.

**Figure 9.37**



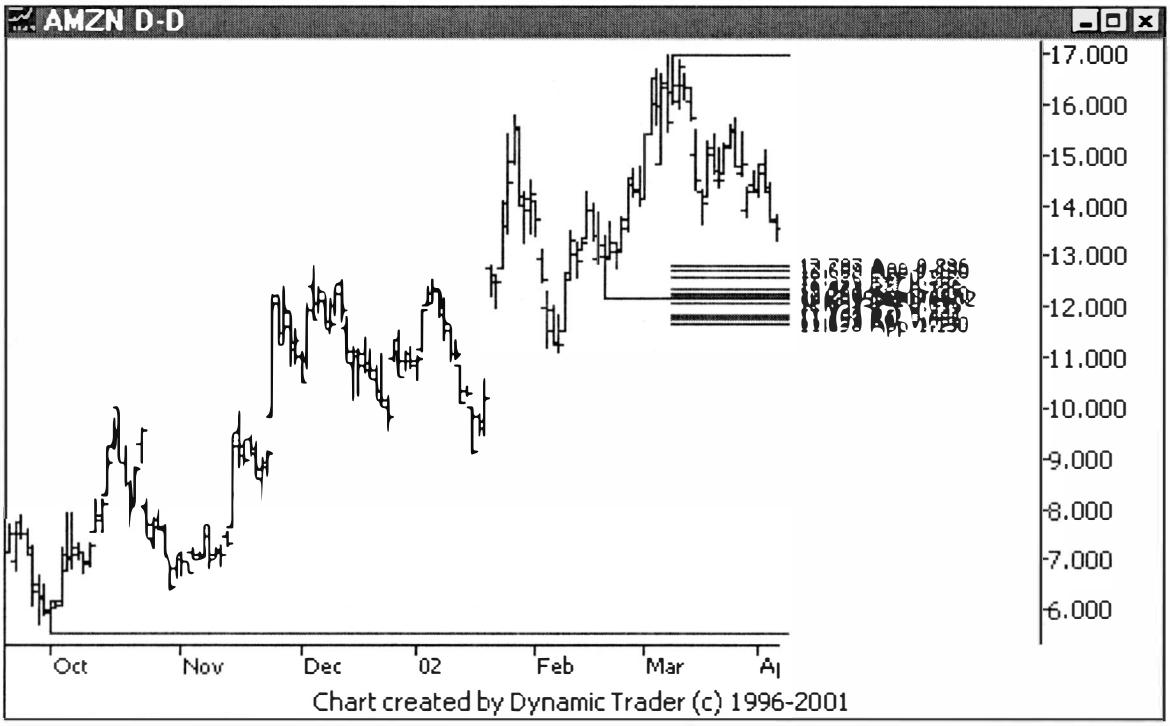

At this point we have three very tight groupings formed, and I only see one other item that I would add in from the data we are looking at right now. There is a minor swing-low on February 20, and that looks to confirm the middle grouping, so I will add that 1.000 retracement in. See figure 9.38.

**Figure 9.38**



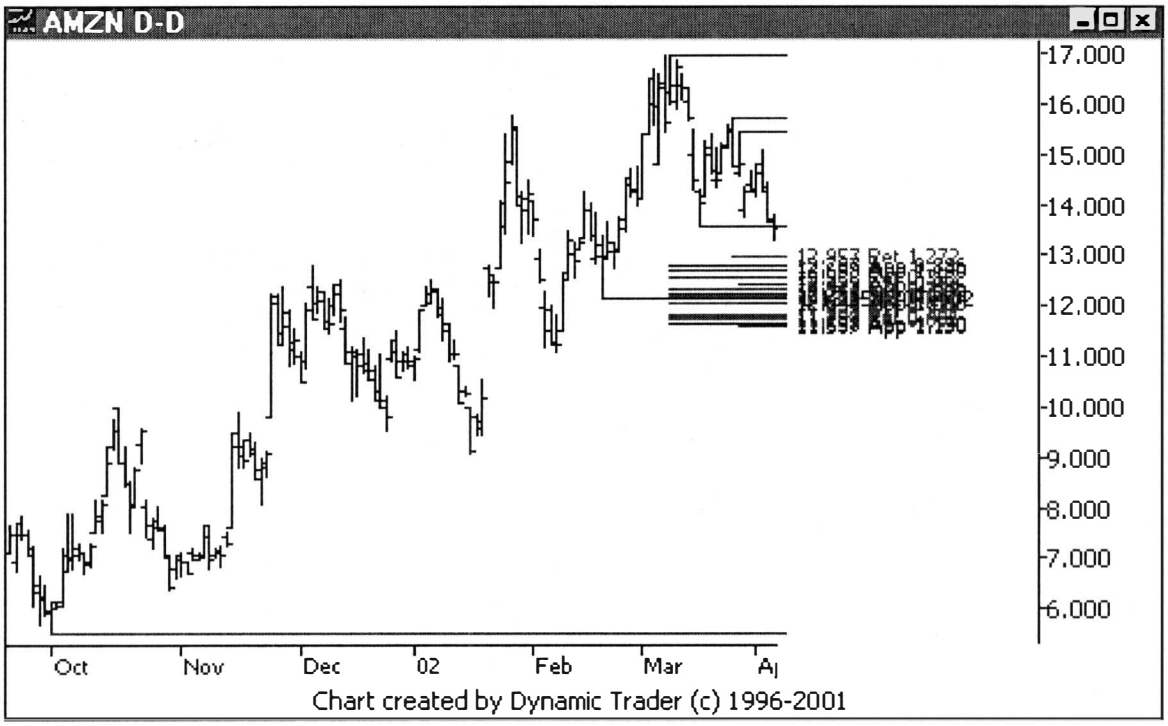

If you remember back to the last example in AOL, we were able to use quite a bit of information from the pullback itself. I'm hoping we will be able to do the same in this example. Let's allow some time to pass and see if AMZN continues toward the groupings, and if so, does the pullback allow us to add in a few more numbers? See figure 9.39.

**Figure 9.39**



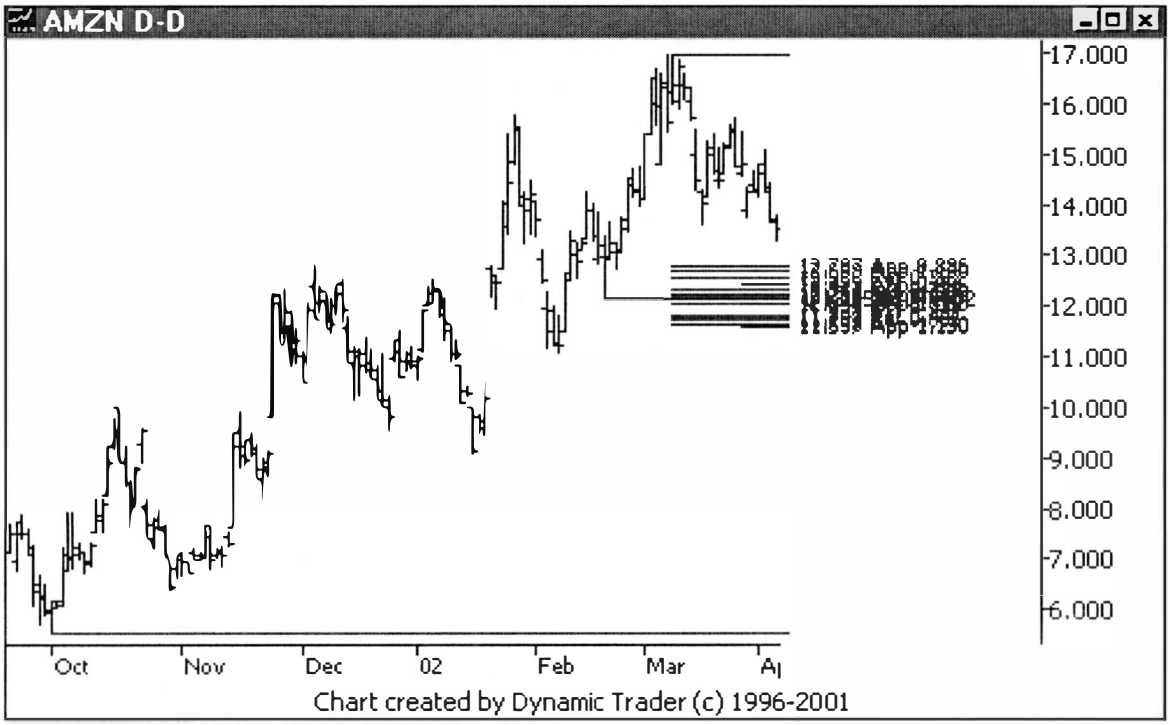

Well, as hoped, the pullback is giving us a chance to use the additional data to make some more calculations. We have what looks like an *abc* correction shaping up, and one that looks like it could terminate in the area we are looking at. Let's do external retracements of 1.272 and 1.618, and projections of .886, 1.000, 1.13, and 1.272, and see if that makes a mess, or supports our three nice, tight groupings. See figure 9.40.

**Figure 9.40**




Not bad, considering we just added six lines at once to an already loaded chart. The 1.272 external retracement line is above our highest grouping, so I'll remove that. One projection is on the high end of the middle grouping; you can choose to remove that, or leave it. At this point we are splitting hairs. In reality, although we have three groupings here, what I see is a broad area about a dollar-thirty wide that AMZN is going to have to fight through (if it is going to go down from here). Once I know we are in this area, I will be focusing on lower timeframe action more than whether we are actually in grouping one, two or three. Let's look at the cleaned up chart. See figure 9.41.

**Figure 9.41**




Now would you actually do this many calculations in preparing your charts? Probably not, since we are seeing repetition ad nauseam. My point here is educational, to show you what you can do with the swings and how incredible it is that the prices wind up hitting the same spots with surprising frequency. Generally, once the groupings become clear, you might consider stopping at that point.

As promised, I said I would do one more expansion example, so let's add this to the mix. We'll do the expansion off of the end of the *a* leg in the pullback that is headed into our groupings. By eye, I can see it's a fairly small expansion, so I'm going to throw in everything on the small end of the scale. I'll do .236, .382, .447, and .486, and see how they lie. I'll show a chart first with just these expansions, and then the expansions on the chart with all the groupings. I would expect chaos adding all these in, in one shot, but since this hasn't happened yet, maybe it won't happen this time. See figures 9.42 and 9.43.

**Figure 9.42**

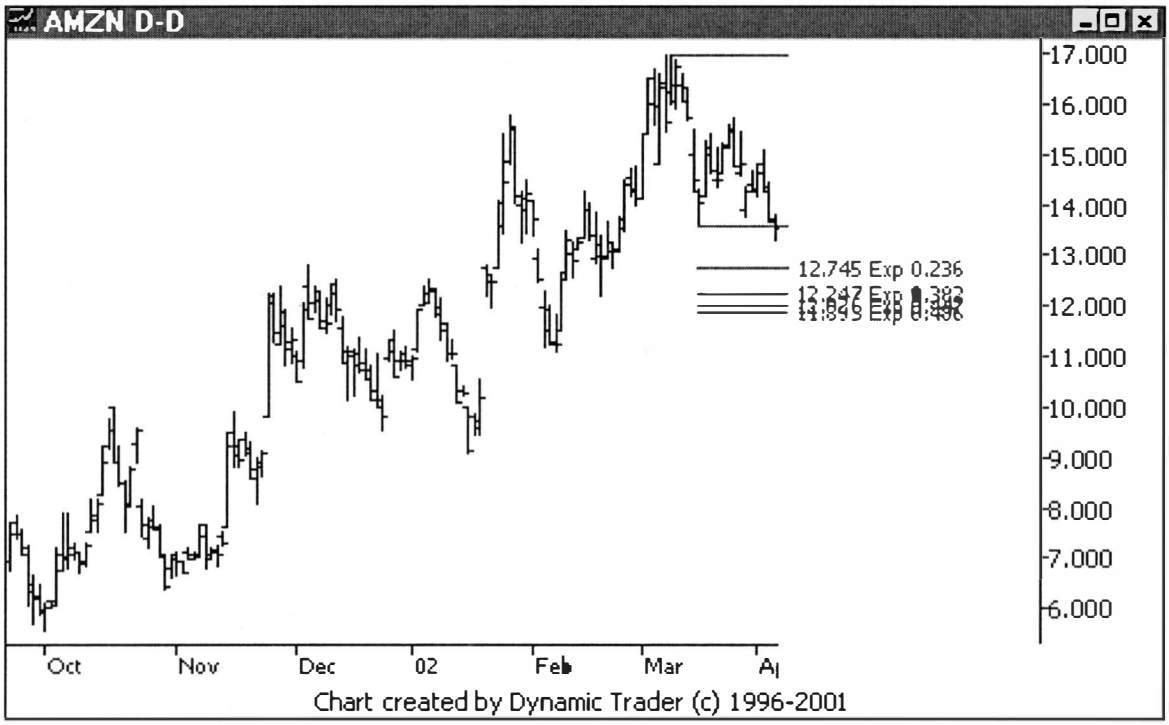
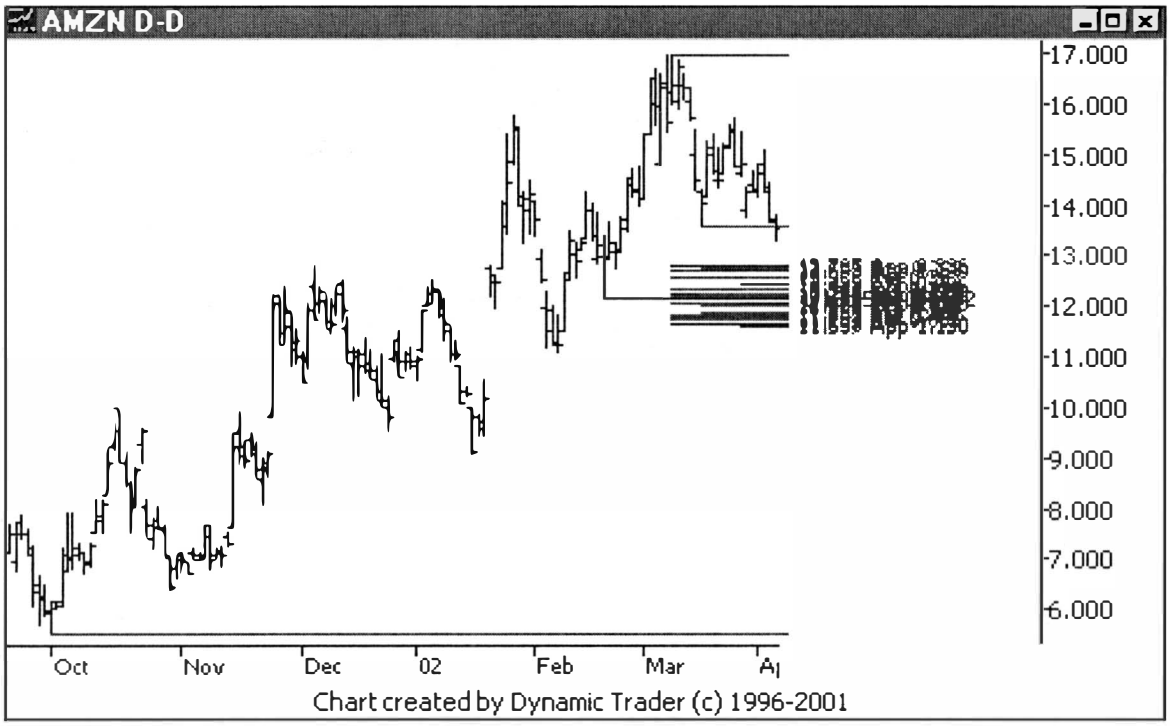

AMZN D-D
17.000
16.000
15.000
14.000
13.000
12.000
11.000
10.000
9.000
8.000
7.000
6.000
12.745 Exp 0.236
Oct
Nov
Dec
02
Feb
Mar
Chart created by Dynamic Trader (c) 1996-2001

**Figure 9.43**




Again, all the expansions are overlaying the three existing groupings. This continues to point out how important all the previous moves seem to be to the current action. Does this mean we can predict the future, or know what the issue will do next? Of course not. What we are trying to do is determine areas of importance where we may consider taking a trade. Let's dial this one down to the 60-minute chart and look for a trigger. See figure 9.44.

**Figure 9.44**




The first thing I want to note is where my groupings begin. What is the high end? I see from figure 9.43 that the top is at approximately $12.80. So whatever trigger method I choose, I won't initiate a trade until the price has at the least hit the top of the highest grouping. I don't want to jump the gun. If I miss a trade because the issue reversed before the groupings were even hit, so be it.

Sometimes an issue will start to reverse on the first grouping, roll over and go to the next grouping, and then make the final reversal. It could do this multiple times as it works its way through the groupings. If you choose a very sensitive trigger technique you may see this happen while you are in the trade. You can sometimes avoid this by choosing an entry technique that requires quite a bit of confirmation, such as breaking a trendline, or taking out a minor swing-high or low. Of course, there are trade-offs to this approach, such as the stop being larger, perhaps. You will have to make your own choice, but this is something to be aware of.

Again, I will choose a trendline violation on the 60-minute to trigger entry for this example (once AMZN has traded into the area of the groupings). See figure 9.45.

**Figure 9.45**




Let's see what happens as more time passes on this 60-minute chart, and see if we get a trigger. See figure 9.46.

**Figure 9.46**



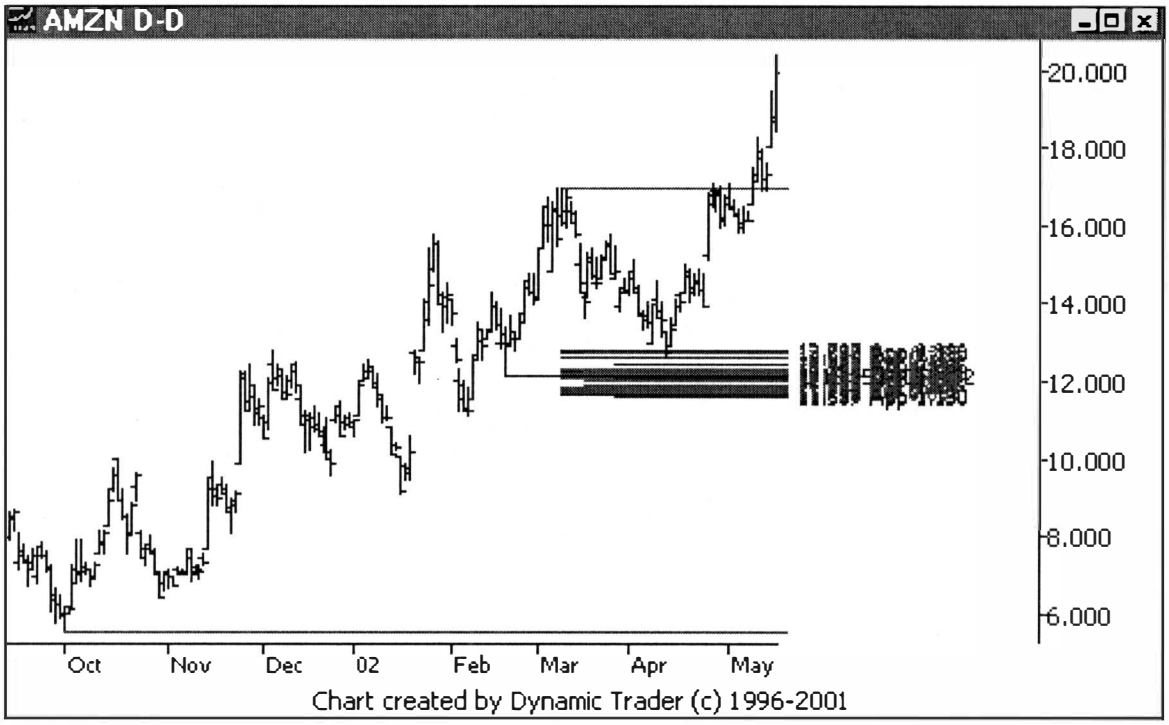

Using the trendline violation trigger, this trade would now be triggered at just over $14.00. Let's go ahead in time just a bit, and see what happened. See figure 9.47.

**Figure 9.47**



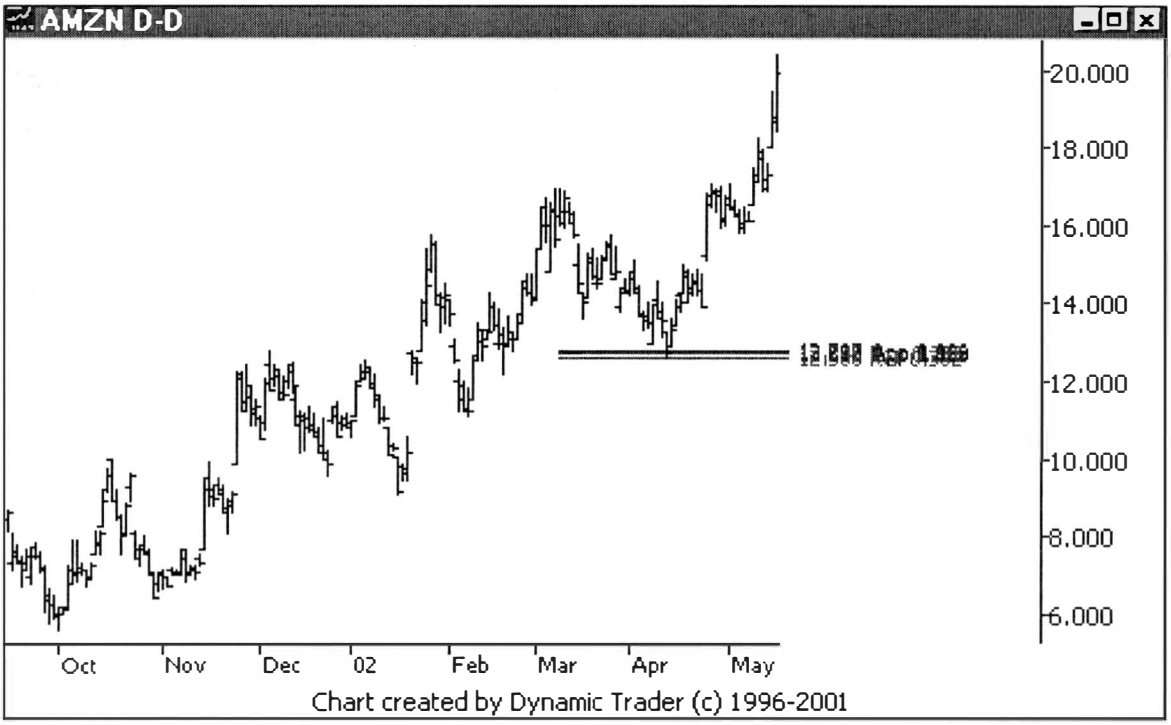

AMZN does appear to have reversed at this point. Let's look at the daily chart to see what happened here. See figure 9.48.

**Figure 9.48**




Let's take a look at the same chart as in figure 9.48, but let's look at it showing only the uppermost grouping, the one AMZN actually reversed off of. See figure 9.49.

**Figure 9.49**




These techniques may take some practice to learn, but as you practice you will better your chances of developing the proper feel. This is real hands-on stuff; you learn by constructing the groupings. As you develop the mechanical skills to put the lines on the charts, you will also be drinking in the relationships these lines represent. Don't expect to be an expert overnight. Expect to put a lot of lines on the chart that are all over the place. When you start constructing groupings that are fairly tight right off, with few erasures, and when you pick very few charts that you later decide aren't very harmonic, you'll be on your way.

# Chapter 10

## Trading Techniques

Now that we have the idea of how to create some nice groupings, how can we look at those from a trading standpoint? To begin with, we first decide on a timeframe and on a trend we would consider trading. This trend will always be larger, by definition, than the pullback or correction we are trying to enter the trend on.

In the previous chapter, I made it pretty clear that I personally prefer to look for trends and then construct groupings in the approximate zone between a .382 and .447 pullback of the entire traded trend up to that point. Does this mean that I won't take a trade with a grouping constructed around a .236 retracement? Or the larger .618 or .786 retracements? Absolutely not.

There are plenty of great trading opportunities around the shallower .236 retracement zone. And, in fact, I find more information out there about trading around the .618 retracement area than any other area. Likewise, there are also specific patterns that terminate right on the .786 retracement, as well as the .886 retracement. Groupings based on these areas can set up some very nice trades.

I just want to point out that I, myself, like the well-established trend with a moderately shallow (.382-.447) pullback. I feel that if the correction is greater than this .382-.447 amount, you have a pretty good countertrend move in place. This makes me feel like the momentum is now beginning to pick up in the direction opposite of the direction of the trend I want to get on board. Consequently, if I 'feel' momentum building in the opposite direction, I don't feel as comfortable getting on board the original trend.

Don't get me wrong, the momentum of this countertrend can quickly reverse and the original trend re-establish itself. Many trading styles are even based on this type of reversal play. In this chapter I will include some examples based on the areas outside of my preferred .382-.447 area, because some readers may prefer to trade in these zones. Keep in mind, you need to find areas that you are comfortable with for your trades.

I like the fairly smooth trend with .382-.447 pullback for what seems, to me, to be logical reasons. I find the .236 area too shallow, and many times the correction will continue after a consolidation or small countermove. This continuation will shake me out, since I usually keep my stop just below the grouping I'm using for the trade.

The downside to my shying away from the .236 area is that in a very strong trend, that may be all the correction you get. Moreover, if you do get in on that small pullback, you can have quite a move ahead of you, which could be profitable enough that if you miss it, you might be tempted to really kick yourself. This is where I use my judgment to make a decision. Again, this is my own thinking process here. You need to develop your own processes, based on your own game plan and risk/reward scenario.

If the trend is very strong and smooth (I determine if it is strong and smooth by comparing it to how that issue usually behaves), I may set up a grouping around the .236. If I like the behavior on the smaller timeframe and get a clean trigger, I will consider the trade. I'll be on the lookout for the correction to continue and stop me out. If so, I'll stay with my stop and look to re-enter on the .382-.447 groupings.

If you like this .236 setup and have a higher risk tolerance, you can look to enter in the .236 area and put a stop just under the .382-.447 zone. The nice thing with the .236 area is that if that's all the pullback you are going to get, the trend is usually pretty strong and the reward may be significant. That may justify having a wider stop. If I don't have a trend that is very strong and smooth, I will just construct my groupings between the .382 and the .447 retracements, and skip the .236 area.

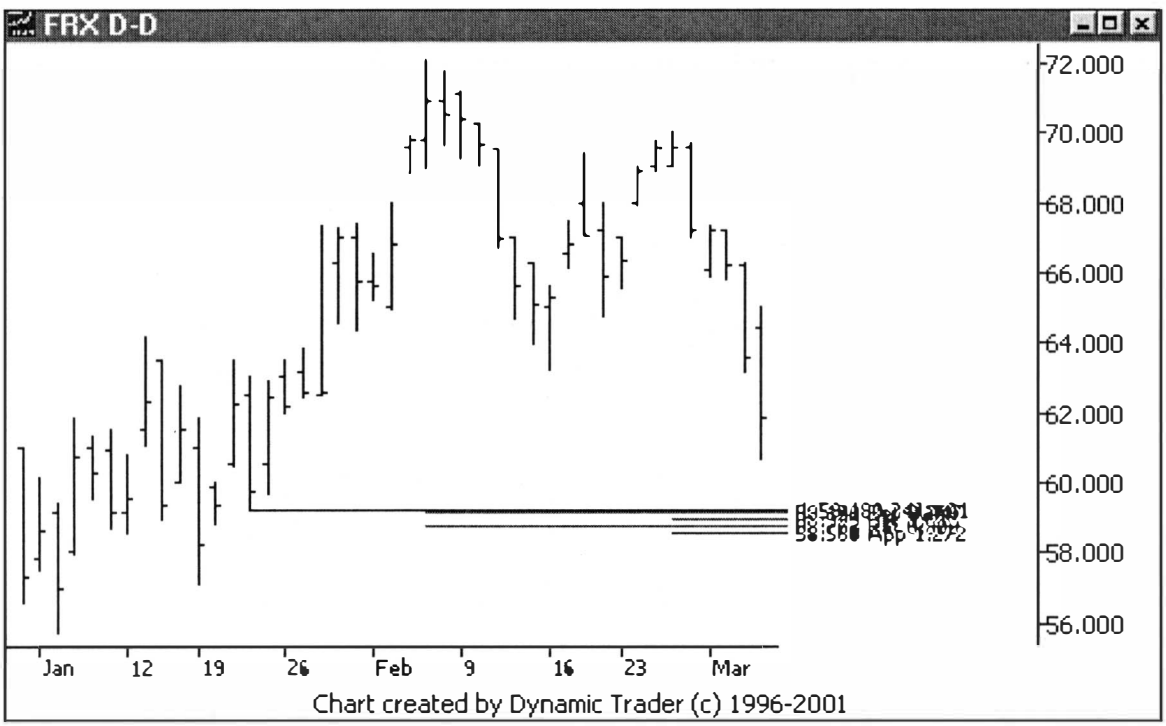
Constructing groupings in the larger retracement areas (such as the .618, .786 and .886) follows the same procedure as shown for groupings in the .382-.447 area. The major difference for me in my trading those groupings is how much confirmation I generally want, to convince me to take the trade. The more the countertrend move has traveled, the more nervous I get that it may be a new trend. The more nervous I get, the greater the premium I'm willing to pay in terms of confirmation.

Traders have to individually make this decision, with regard to confirmation, as far as how much they feel they need. For me, it's an almost linear decision. I need almost no confirmation for a .236 grouping, a small amount

for my usual .382-.447 grouping on a smooth, strong trend, and more and more as the groupings are based on larger retracements. For an .886 grouping I would need a **lot** of confirmation on the smaller timeframe.

Let's start with a look at a trend with a fairly deep correction. See figure 10.1.

**Figure 10.1**




We have a nice tight grouping where we feel a trade might be taken. The grouping has internal and external retracements, a projection and an expansion. The assumption is the trend may resume in this area. We have a few choices now. One choice would be to take the trade once it simply gets to the zone. This has the look of catching a falling knife, but that would still fit the risk profile of some traders. Since the trade is in the direction of the larger degree trend, it's not as outrageous as it might seem. Again, this type of decision is up to the individual trader's risk profile.

You can also watch as the price action enters the grouping and wait for it to stall, hoping to avoid a falling knife (by waiting to see if it has at least

stopped falling). This would seem to have a little bit less risk than the first option. Again, this is a personal decision based on the risk parameters you've decided on for your trading.

Next, you could wait for the price to start to turn in the direction of the trend. This would likely have even less risk, but sometimes a bounce can happen quite fast and you may get left behind. The more confirmation you look for, the more of the move you may miss.

If your risk profile demands a lot of confirmation, you can give up some of the potential move and look for a trigger that the move back in the direction of the trend has fairly started. Is that any guarantee the move will continue? Of course not, that's what stop losses are for.

There are an almost infinite number of possible triggers to use, once the price action has reached the target zone. Some examples might be: price crossing a moving average, dual moving average crossover, Bollinger band reversal, trendline break, exceeding the high or low of the previous bar, taking out a swing-high or low on a smaller timeframe, simply entering the zone, and so on.

The issue here is to determine how much confirmation, if any, you want before you decide to take the trade. Although I have been strongly emphasizing this decision is up to the individual trader's risk profile, there are some thoughts to consider in making this decision, as I started to discuss in the beginning of this chapter. It would seem that the longer the correction or pullback is, i.e. the longer the countertrend has become, the more confirmation you would want.

Why would that be so? You never know when a countertrend move is the start of a new trend and not a countertrend after all. Since we are going on the assumption that a trend in motion tends to stay in motion, the longer the countertrend move goes, the more it would seem to be a new trend, and not a correction. This leads me to want more confirmation the deeper the correction has gone.

As mentioned, this may translate to little or no confirmation for shallow pullbacks in the .236 or .382-.447 retracement areas. Much greater confirmation would be required in the .618 or .786 retracement areas, such as requiring a smaller timeframe swing-high or low to be taken out. It was

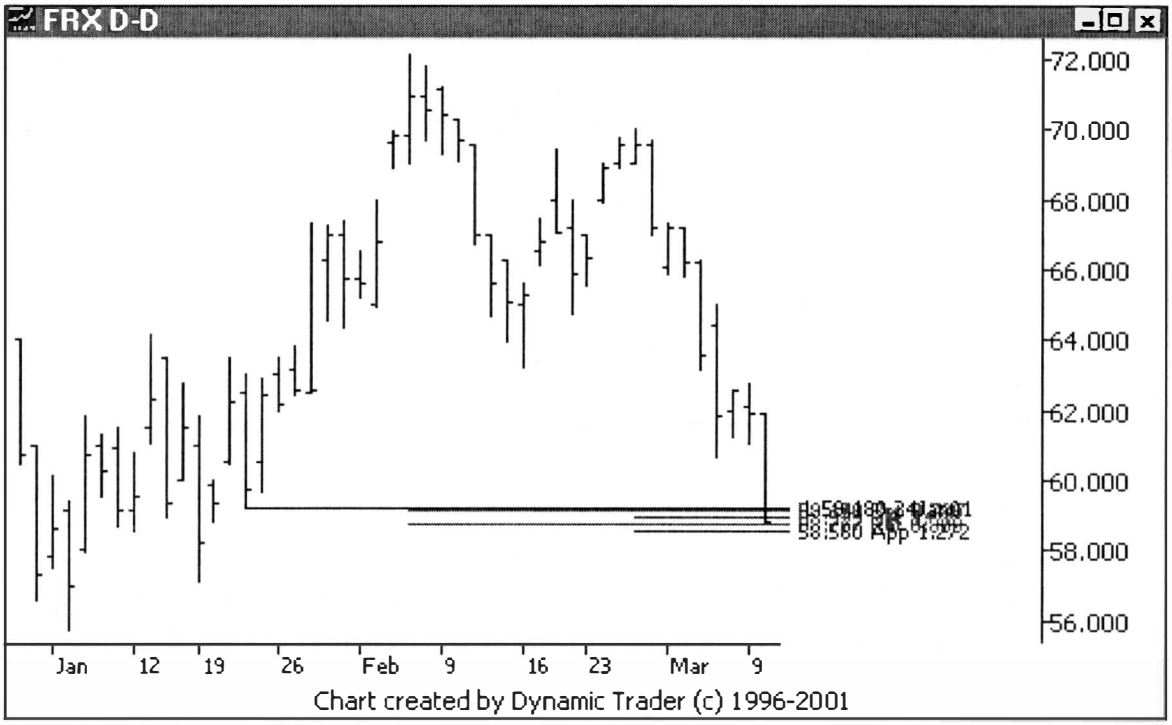
not my intention to present various trigger styles in this work. I want to leave that up to the individual traders so that they can use what they already know and are comfortable with, with the new concepts I've presented here.

Let's move on to an extensive series of examples, with notes on possible triggers. Since the real world has many failed trades, I will choose some examples with groupings that fail to hold. One of the things that you may see is that if a price grouping fails to hold, the price action frequently gravitates to the next grouping like a magnet.

This can be helpful in determining where to put your stop loss. One choice, the one I use most commonly, is to put the stop loss just below the grouping you are using to enter the trade. Another choice is to place the stop loss just below the next grouping. You would want to consider how far away that next grouping is, to determine if it is feasible for use as a stop loss area. If it's not too far away for your risk profile, you'll be stopped out of less trades using it, but you'll lose more when you are stopped out. This is, perhaps, another of the great dilemmas of trading. In very noisy markets the farther stop may be necessary.

Let's start with what happened with the example from figure 10.1. Here it is as it enters the grouping and a trade is considered. See figure 10.2.

**Figure 10.2**




This trade has a beautiful pattern. There is an extended *abc* pattern down into a nice, tight Fibonacci grouping. One thing jumps right out at me and that is the long, down bar closing on it's low for the day, right as FRX trades into the grouping. Normally, this would be a big alert that this issue is very weak and likely to continue down.

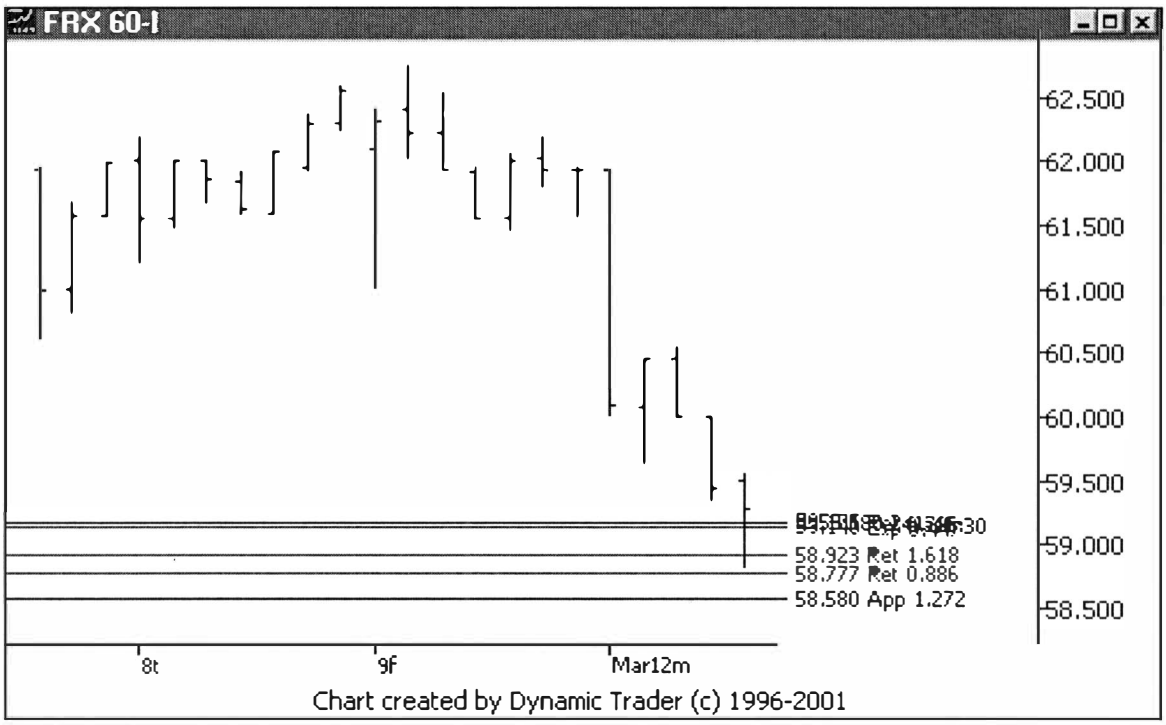
Why do I say 'normally'? Many, many times you see exhaustion moves into the groupings in the .786 and especially .886 areas. These moves can look downright scary, only to have the issue reverse on a dime and start a strong new trend in the opposite direction. But, in no way am I implying that you should simply catch a 'falling piano' that looks to be accelerating.

What I am saying is that, when you see this, dial down to the smaller timeframe and observe, and see what appears to be developing. Sometimes the issue just 'blows out the zone', but sometimes it respects the zone and sets up a truly great trade. If you pass every trade that looks like the above, you may miss some nice opportunities.

Now, I can hear a few readers saying, 'Well, I've just been set up for another well-chosen example that looks as if it will crash right through the grouping.

But I bet it's going to reverse sharply and be another big winner.' Let's look at a few 60-minute charts and see if there is anything to trigger us into a trade. First see figure 10.3.

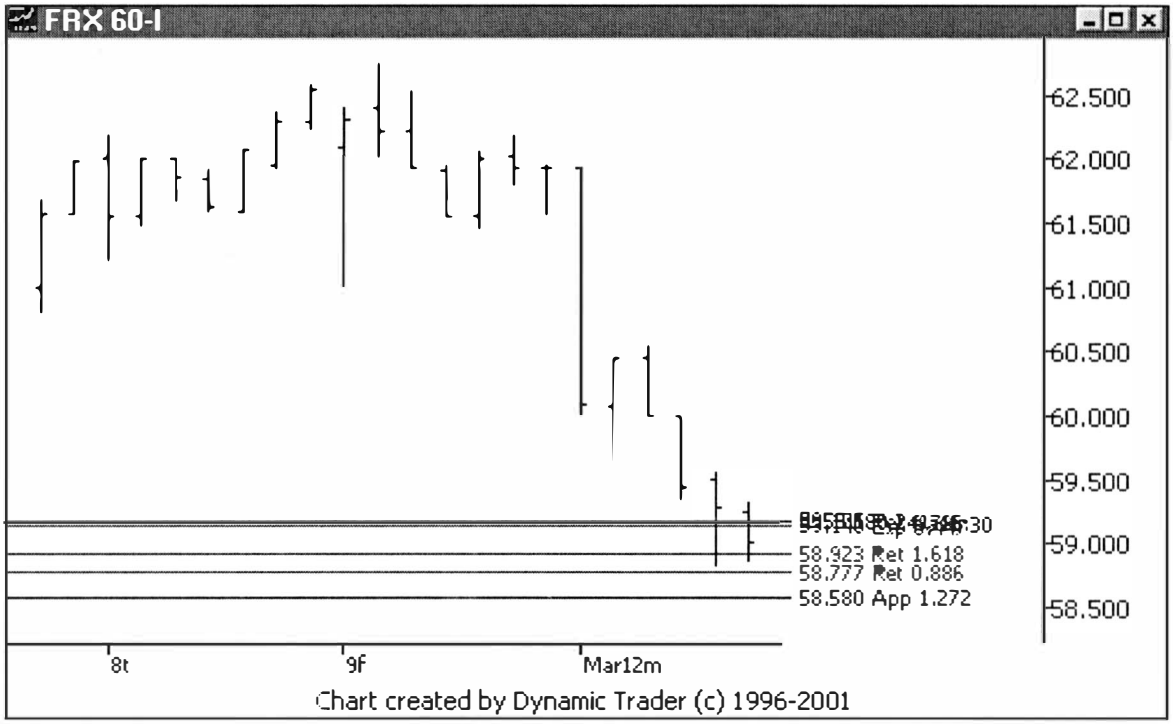
**Figure 10.3**




Here is an expanded view of the grouping on a 60-minute chart, as FRX trends down into the zone. We can see that the 60-minute bar goes into the center of the grouping and reverses, closing in the top half of the bar. Although this may be considered a reversal bar, the close is below the open of the bar. This bar may be implying that a reversal is starting, but I sure wouldn't take a trade right now. Also note, we have three bars in a row with lower lows and lower highs for the bars. This is not real bullish.

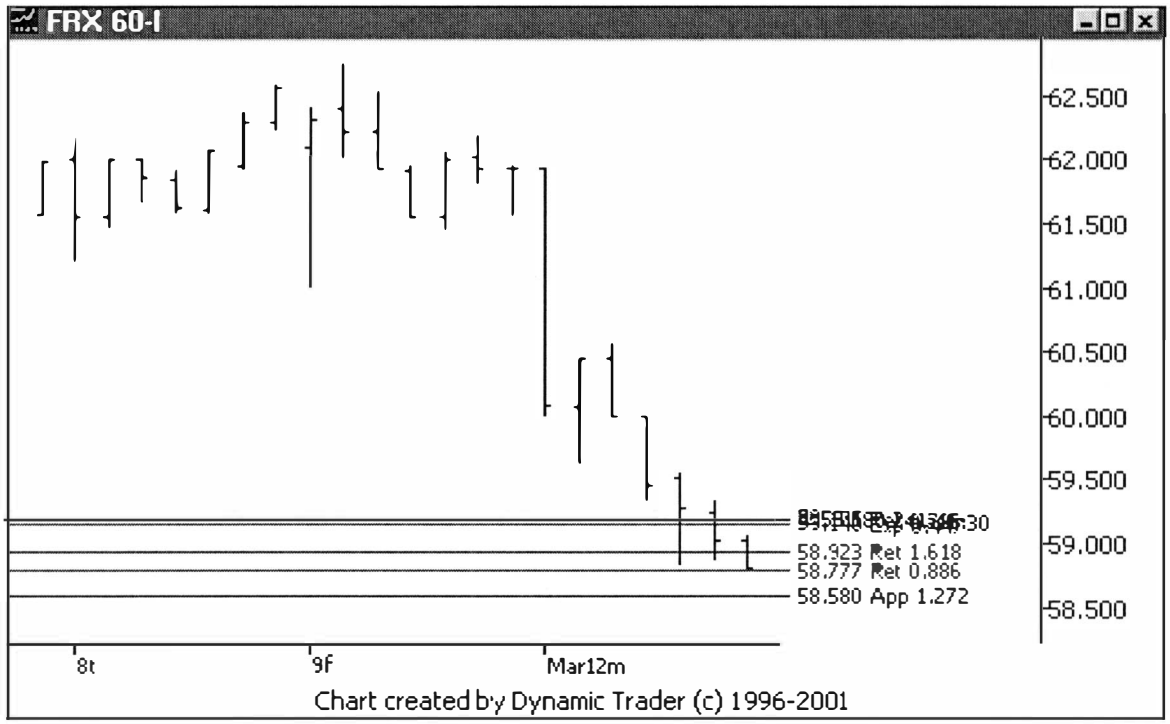
To me, taking a trade here would be akin to catching a falling grand piano loaded with concrete. Taking into account that this is a .786/.886 grouping and that I prefer a pretty large amount of confirmation as it is for .786/.886 groupings, I'd choose to wait and see what happens. If the high of this last bar gets taken out, though, I would really start to watch closely. Let's move forward in time. See figure 10.4.

**Figure 10.4**



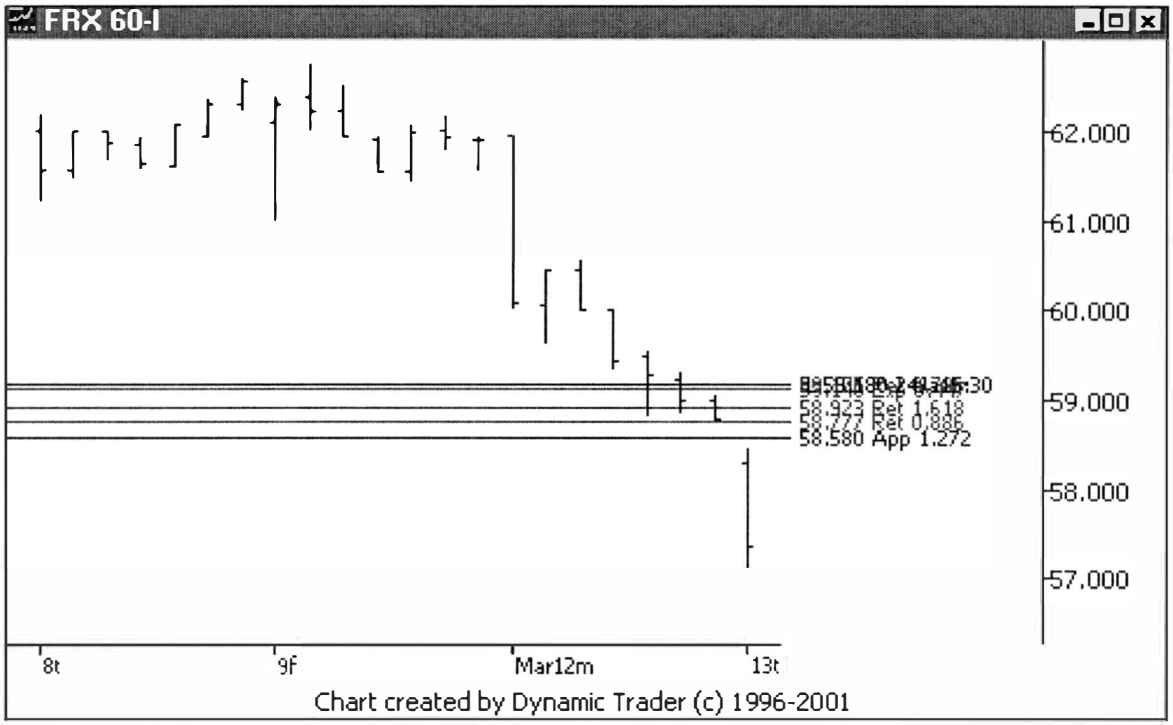

The next bar is an inside bar with a close in the bottom half of the bar, and the close below the open. I'm still watching. Let's continue forward in time. See figure 10.5.

**Figure 10.5**




The low of our bar of interest is taken out, and this latest bar closes on it's low. We are getting closer to the bottom of the grouping. I would be very careful at this point. Let's move ahead on the chart. See figure 10.6.

**Figure 10.6**




Ouch! No trade here. If you took this trade with little or no confirmation you would have been stopped out. To my way of looking at it, this one was never even close to triggering. To make my point, let's look at the chart in figure 10.3, with a very fast 5-period simple moving average added. Some traders use a 5-period simple moving average to trigger entry into a trade. I find this average to be fairly useful for trades where I require very little confirmation.

This is a very quick average, prone to massive whipsaws. It has its place when used in combination with other techniques, but alone it will chop you to whipsaw pieces. Let's look at the chart through the eyes of a trader who likes to use the 5-period simple moving average to trigger trades once they hit a grouping. Assume this trader considers his or her trigger to be a close above the moving average. Did this trade trigger? Was it even close? See figures 10.7 and 10.8.

**Figure 10.7**

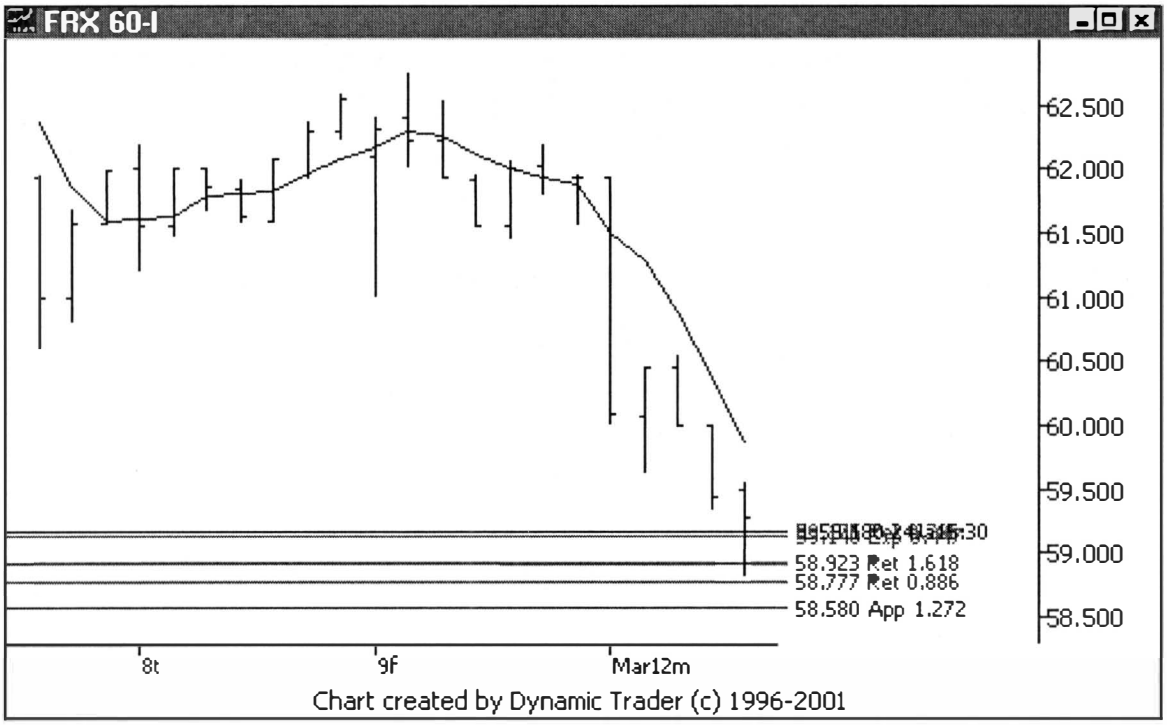
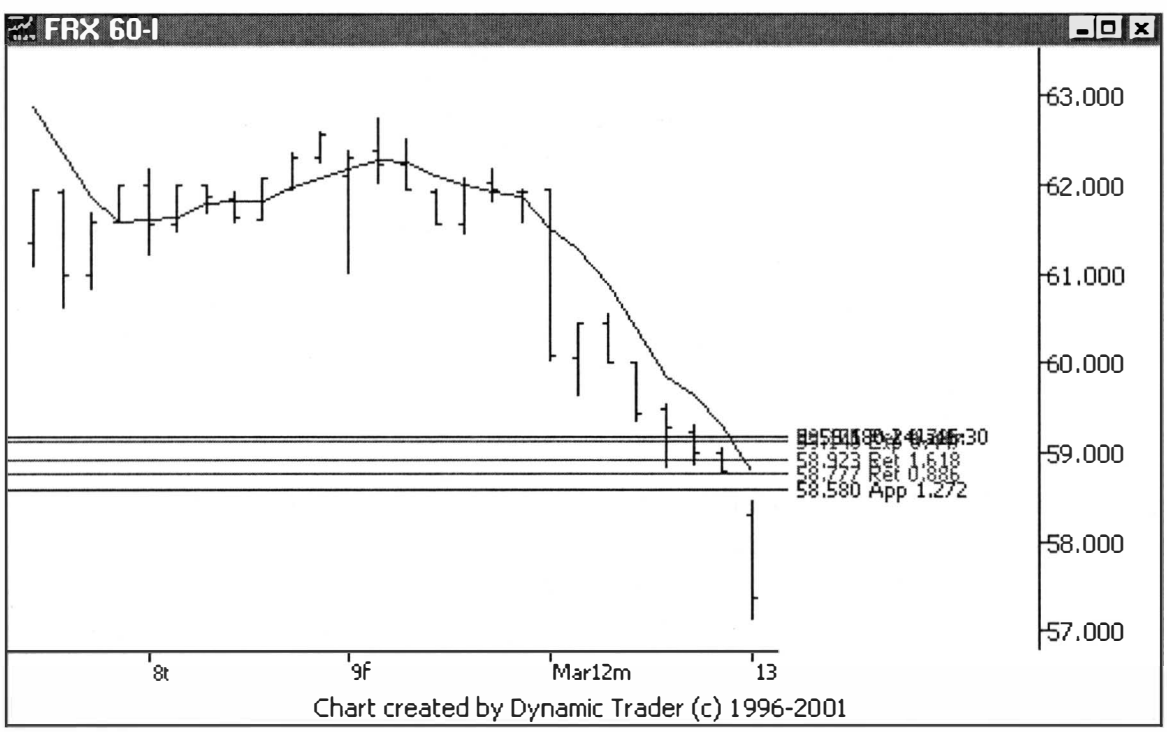
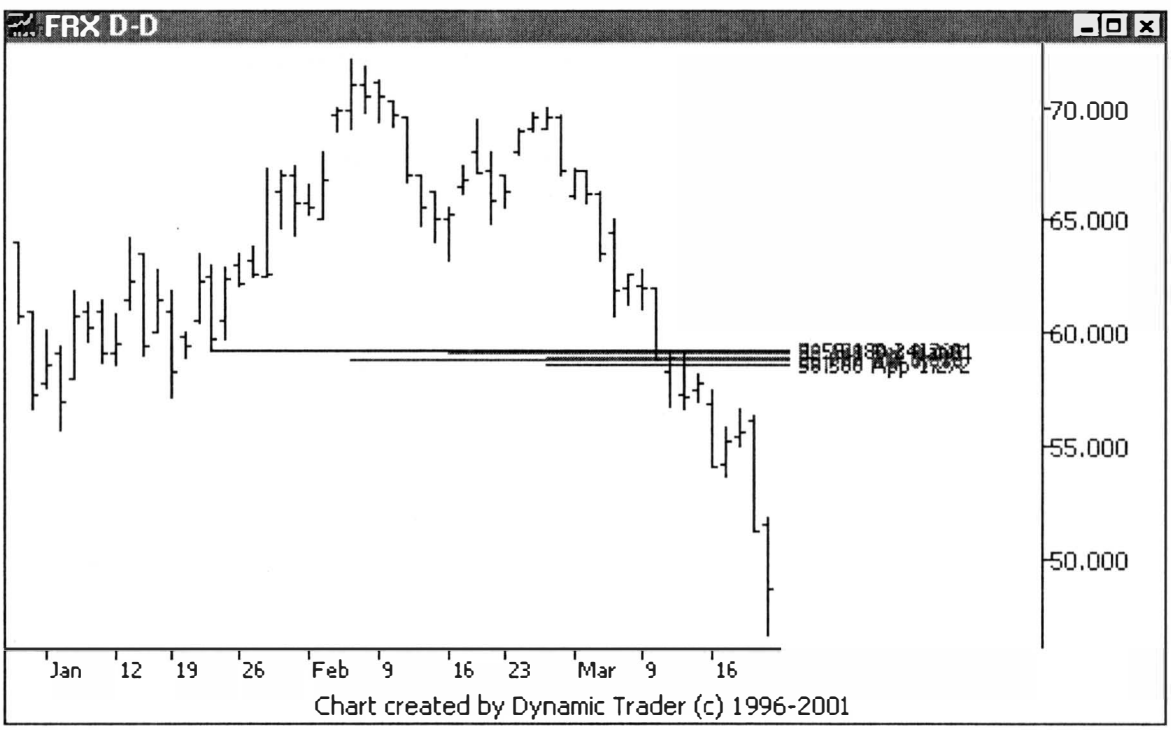



**Figure 10.8**



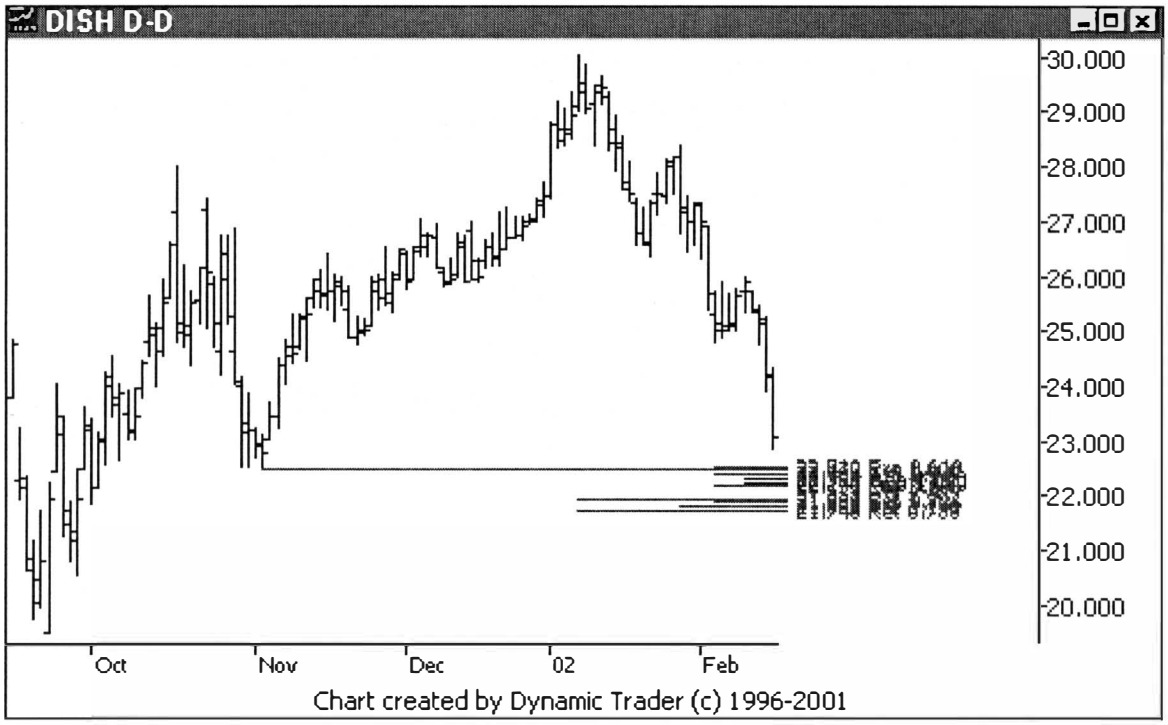
As you can plainly see, this one wasn't even in the ballpark for triggering. I'm going through this example in such detail because I want to show the reader the type of thinking that may go on as a trade opportunity develops. I look at the bar characteristics, at some moving averages or Bollinger bands, and at whatever I think would work well with the particular issue. I then wait patiently for my trigger to actually trigger. If it doesn't, I just don't take the trade. I don't jump the gun on my trigger. This, alone, saves me from quite a few failed trades. Sure, some successful trades are missed because the issue just hits the grouping and then rockets away. I'd still rather miss some and stay with my game plan, which requires a clear trigger. Let's see where FRX went from here. See figure 10.9.

**Figure 10.9**




This was a clear blowout of the zone. There wasn't even so much as a small move back above the zone once it was penetrated. No trigger, no trade. They don't all work out. That's trading, and that's why you never, ever trade without a stop in place. Let's look at another example. See figure 10.10.

**Figure 10.10**



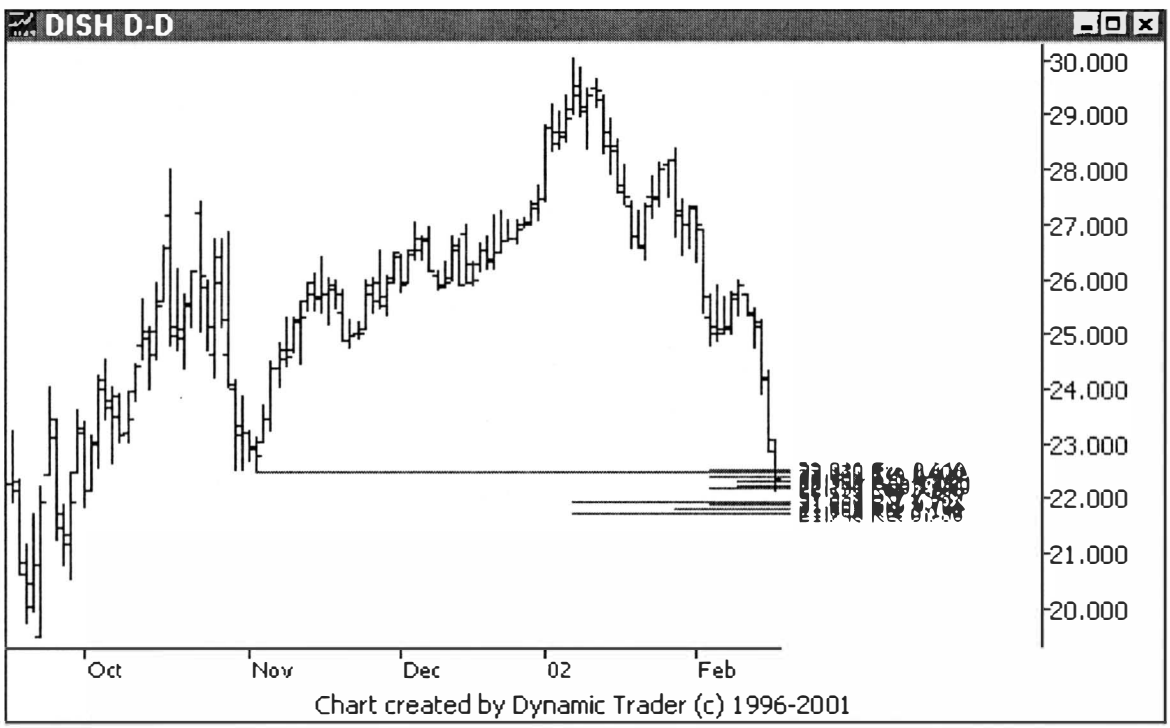

This is a great example of a large retracement back to the .786 area. There are two groupings visible. (Note: the first grouping includes a pretty distinct previous swing-low, which was visited on three different days in late October and early November before DISH finally decided to reverse there.) This example also has that 'rapid drop into the zone' look, the same look as the last example. And that last example failed miserably in the zone. There are two expansion bars in a row with closes on the low ends of the bars.

Will the zone hold? Will the trade trigger? For me, I'd need a pretty strong trigger to consider this trade. Two choices for triggers come to mind. I can use the cross of a 5-period moving average through a 15-period moving average. This would, of course, require the price to be above both averages. The latter condition regarding price may seem like it goes without saying, but sometimes an issue can reverse quickly and actually drop below both the averages before they even noticeably change.

My next, and preferred, choice of a trigger would be if the issue meets the 5-15 moving average cross conditions, then pulls back, and then takes out the swing-high that it just formed. This is a lot of confirmation and carries quite

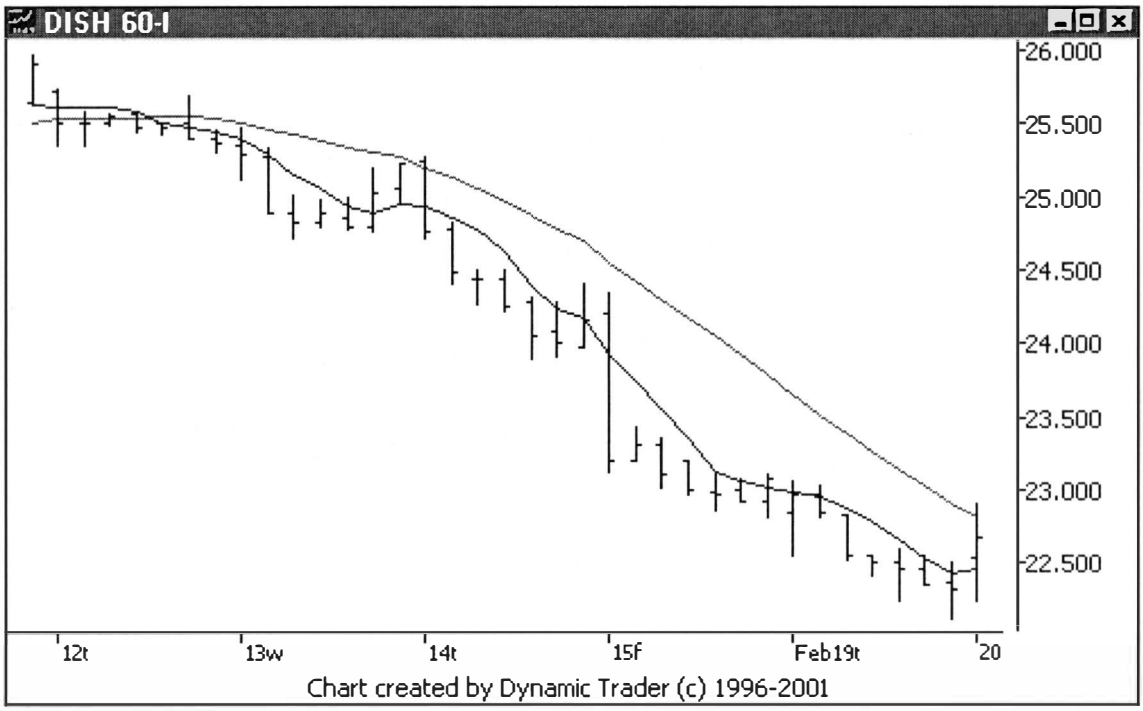
a bit of downside, both literally and figuratively. As far as literally, it would require a wide stop, since most logical stop placements (such as just below the swing-low) are going to be quite far away. As far as figuratively, the downside is that you may not get a pullback; the pullback may come quite a ways after the move starts, and consequently you would miss a lot of the early part of the move, and so on. You pay a price for this much confirmation. Let's see how this potential trade develops. See figure 10.11.

**Figure 10.11**



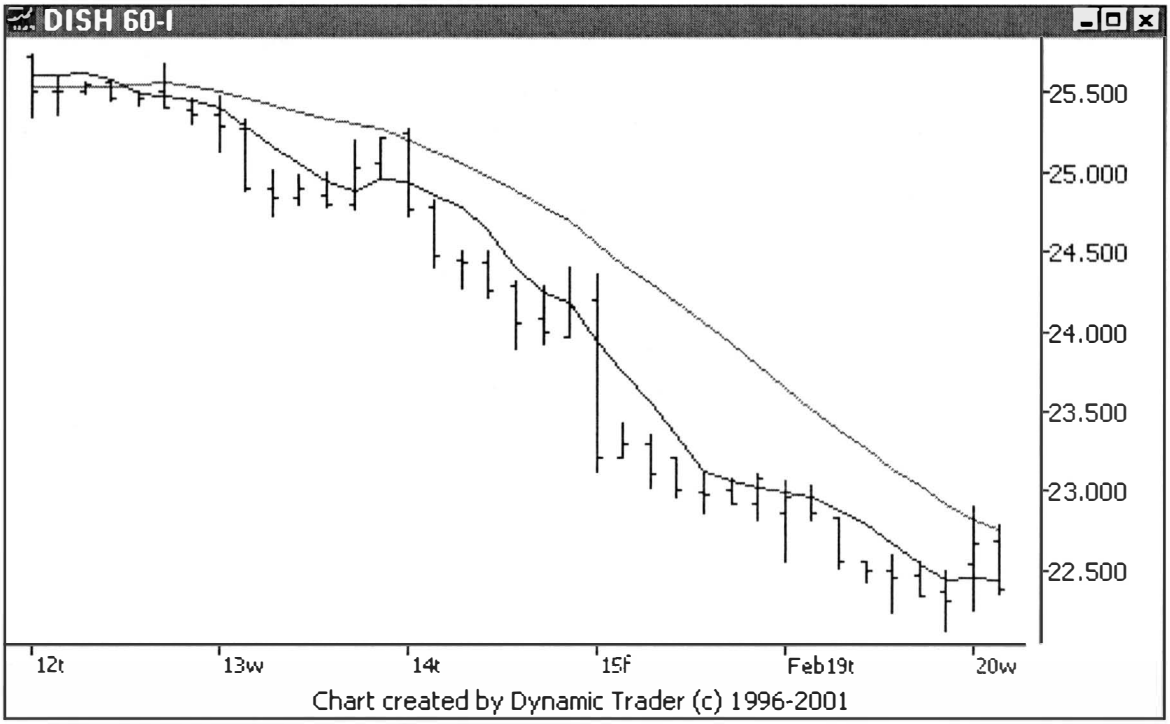

This is starting to look a real lot like the last FRX example. Now we have three down bars with low closes as we slightly penetrate the bottom of the first grouping. Let's dial down to a 60-minute chart and see what is happening. The groupings are at approximately $22.50-$22.20 and below that $21.95-$21.70. I will leave the groupings off the 60-minute chart so we can focus directly on our triggers, and add the 5 and 15-period simple moving averages, necessary for our triggers, to the chart. See figure 10.12.

**Figure 10.12**



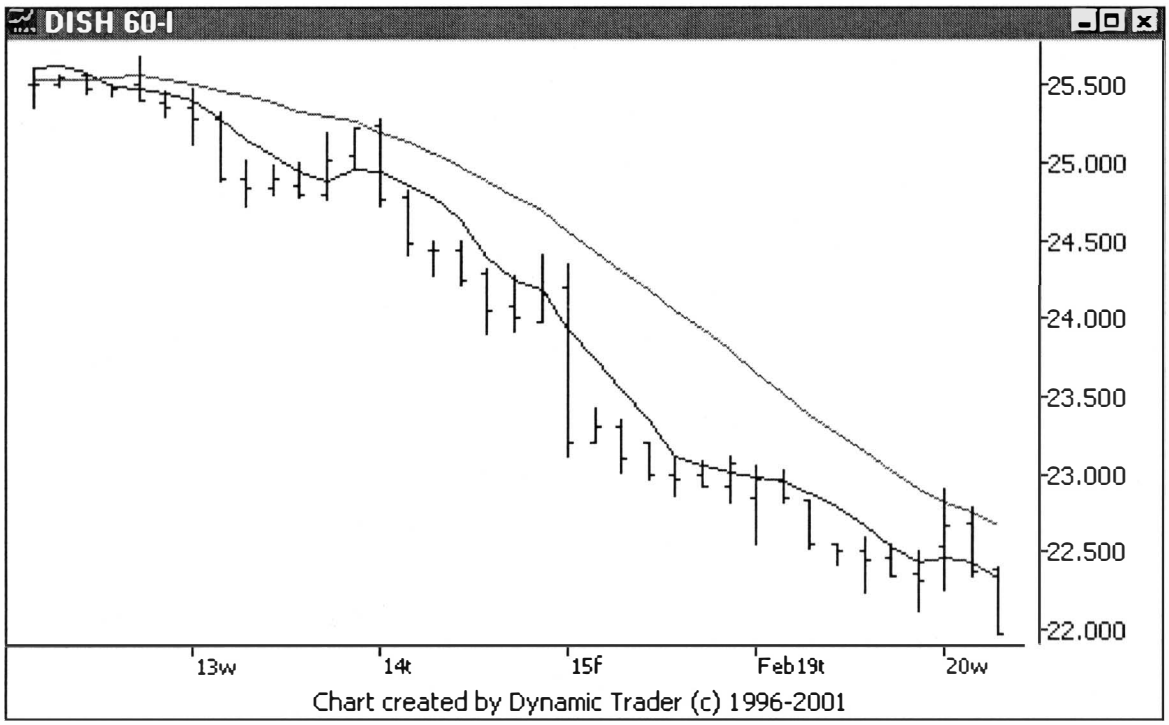

DISH has entered the first grouping and has started to reverse. The last bar has a higher close than open, but it's not a real strong bar. All this matters very little since we have a clearly defined trigger, but I like to make an assessment of the situation as it unfolds and reserve the right to not take the trade, even if the trigger is hit. If the action is what I would call poor (choppy, poor bar-formations, lower volume than expected, etc.), I will not force myself to take the trade. That's just my personal trading style. Let's follow this one as it unfolds. See figure 10.13.

**Figure 10.13**



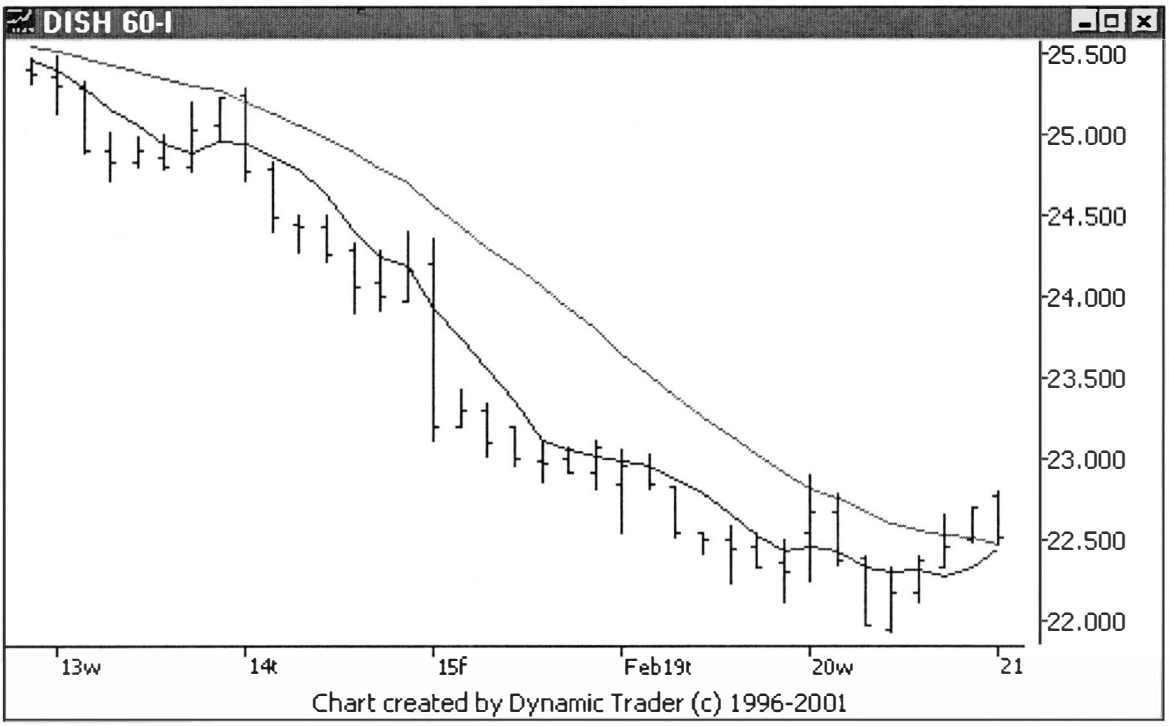

Nope, it's reversing right back down. At this point I'd just keep watching as it develops. See figure 10.14.

**Figure 10.14**



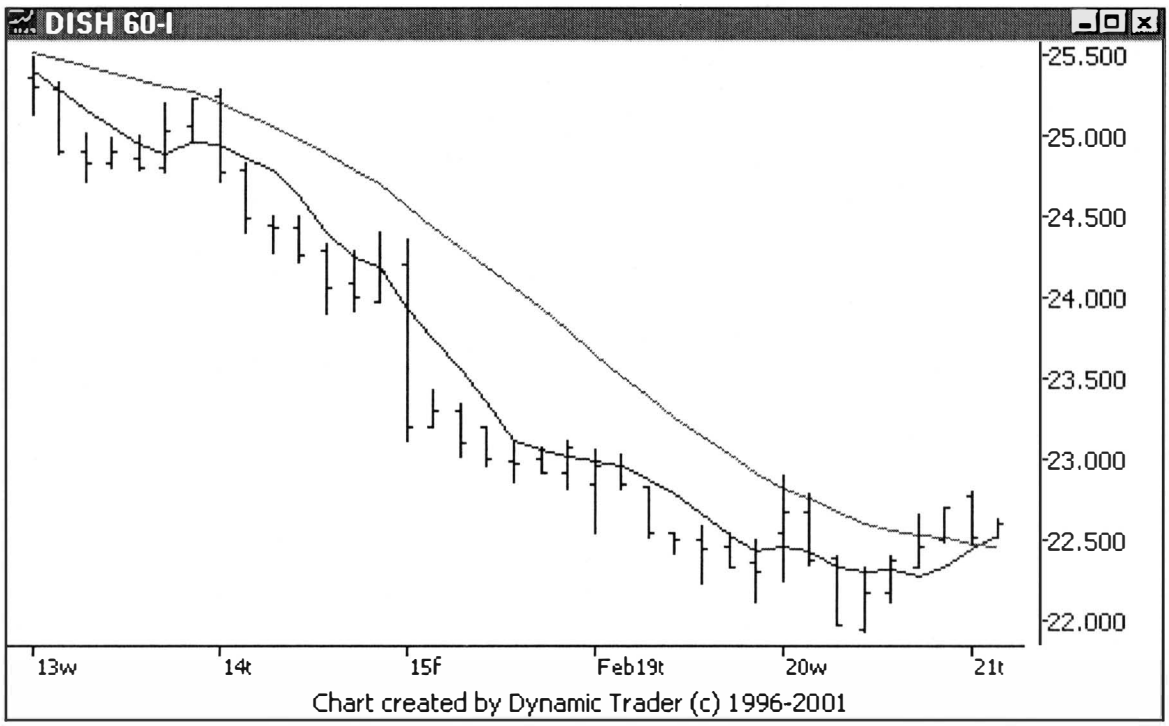

Remember, the lower end of the first grouping was at $22.20. The price action is now below that. We must watch as the second grouping is hit. If the price drops below the bottom of the second grouping I'm going to stand aside, regardless of what happens. Let's move ahead in time. See figure 10.15.

**Figure 10.15**



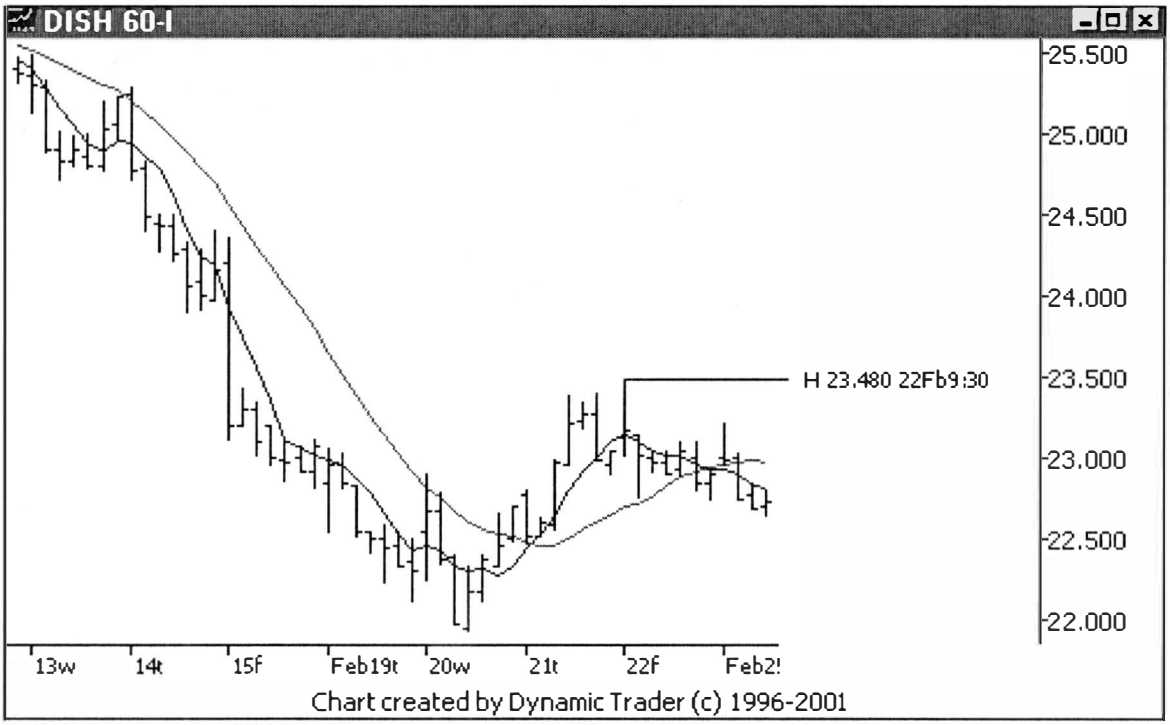

Now this is shaping up much better. The price has moved above both moving averages and if it continues like this, the 5-period will cross the 15-period shortly. This would be the first trigger that we were looking for. Notice that the last bar is reversing back down with a low close. Perhaps the price will now go set a new low, or maybe it will go straight up. All we can do is watch and wait, and then react if we see the specific trigger, which we are waiting for, materialize. See figure 10.16.

**Figure 10.16**



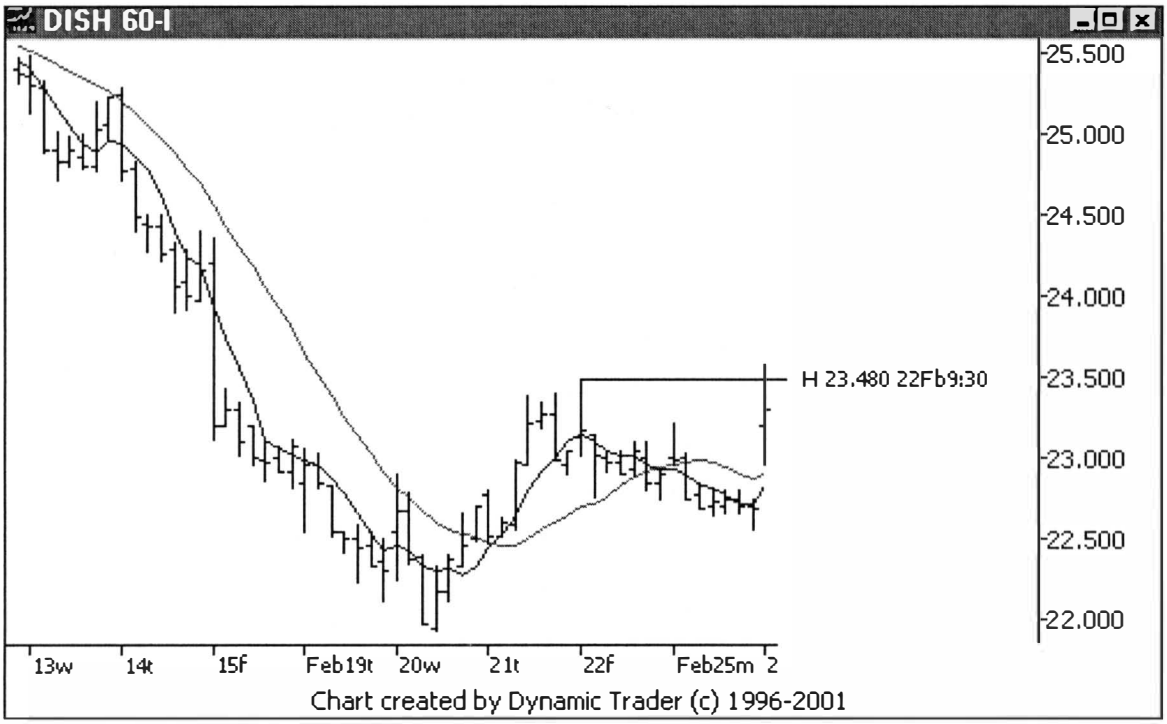

At this point, the trade would be triggered, using the first trigger. The price has bounced right off the top of the second grouping, the moving averages have crossed, and the price is above both of the averages. Let's see if this issue gives us the second trigger, or if we would've missed out by not choosing the first trigger (the lesser confirmation 'moving average cross' trigger shown in figure 10.16). See figure 10.17.

**Figure 10.17**



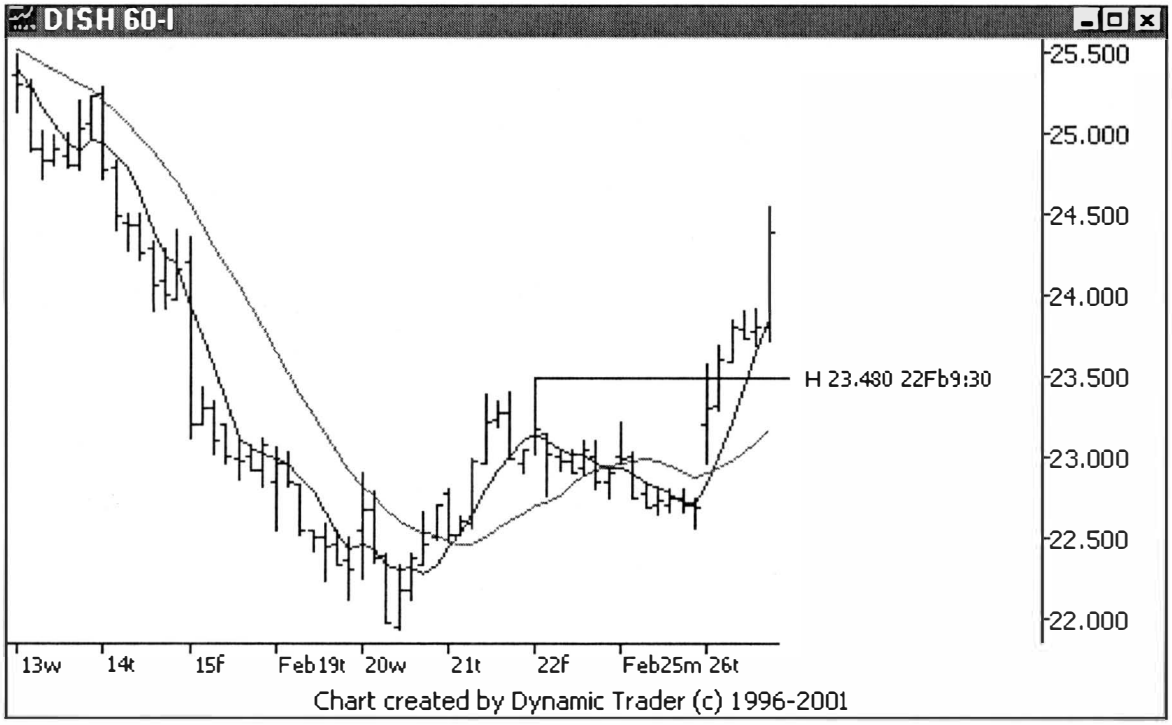

DISH has moved up and is now pulling back. I've added a line to show the swing-high that would be used to trigger a trade using the second of the two trigger methods previously discussed. If the price takes out the high at $23.48, a trade would be triggered (provided I don't see any action before then that I don't like. For example, if the price retraced down below a .786 of this new move up, I might think twice. If the new trend is valid, I'd like the 'test' of the low to not be a 'rigorous' test.). Let's move forward and see if a trade is triggered. See figure 10.18.

**Figure 10.18**



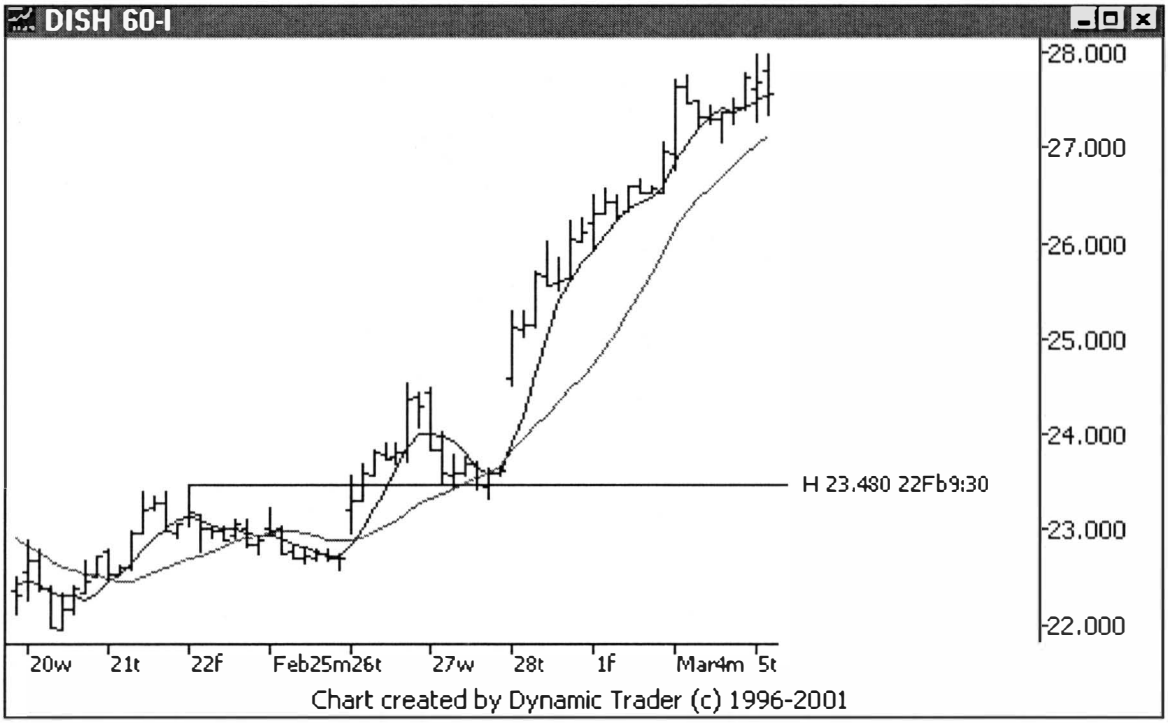

The trade is now triggered, using the criteria of the second trigger. Notice a few things here. There is a gap up, some trading above the trigger line, and then a fall back towards the middle of the bar. This bar, in Japanese candlestick terms, is a 'spinning top', a bar of indecision. If I was in this trade, at this point, I would be nervous. Not that it matters, whether I'm nervous or not, the course of my action is to now let it play out according to my game plan, but I always rest easier when I don't take a lot of 'heat' right off the bat. Reality is, sometimes you take heat immediately and the trade still works great. You must trade your plan, regardless. See figure 10.19.

**Figure 10.19**



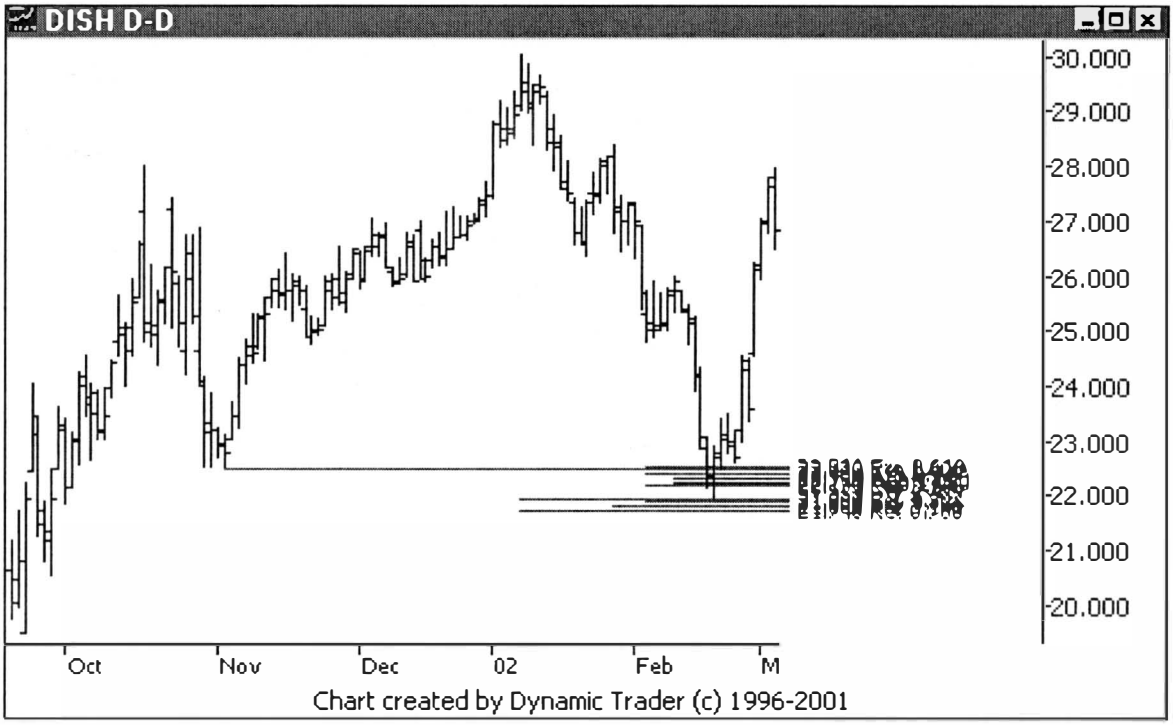

This trade is working out quite well. Although I'm staying away from covering trade management, this would be a time that I would be thinking strongly about taking partial profits on such a strong expansion bar up. Let's continue forward in time. See figure 10.20.

**Figure 10.20**




Wow, that expansion bar up was just the start of the move. I wouldn't have any 'sellers remorse' for taking partial profits, though, as this move is the exception. Many moves start out strong, and that's it. Let's finish this example with a look at the daily chart. Notice how it showed no respect for the first grouping, but bounced right on the top of the second grouping. See figure 10.21.

**Figure 10.21**




Remember the three strong down bars going into the zone? The bars that would scare many people away from the trade? In this case, the zone held like a rock, and DISH reversed strongly off the area. This is not uncommon. Sometimes the best trades scare you the most. *But understand*, I'm not saying to search for scary trades that look like falling safes, and try to catch them. I am saying that if a potential trade meets all your trade criteria and it triggers, that it may just work out quite well, even if the trade looks downright scary. This may be because it does scare away most traders, and if everyone took the trade it wouldn't likely work out, since the masses almost never win.

By now you should see that the concepts are really the same, regardless of how deep the retracement is, or what timeframe the trade is on. The only real difference is that the deeper the retracement is (the farther away my trade is from the trend that I'm trying to get in on), the more confirmation I prefer to have.

I don't want to try and pick tops or bottoms on my traded timeframe. The closer it gets to looking like a top or a bottom pick, the more premium I'm

willing to pay for added confirmation. Your trading plan may be different; perhaps you don't see the need for this added confirmation. Every trader has their own style, and I can only explain what my preferences are. I would suggest you explore this idea carefully, though, as you work on your trading plan.

# Chapter 11

## Adding Time to the Mix

Up to this point, we have only looked at price. Every calculation, so far, was a variation on price. We took ratios of prices, and added them to other prices, and so on. But 'time' is also passing (as we look for trades and watch them develop), and it seems as though 'time' is just as harmonic as 'price'. It would only make sense to add time calculations to your trading arsenal.

I am only going to do a small primer here on this topic, although at some point I may do a work devoted entirely to the concept of harmonic time calculations. I want the reader to be aware of the concept, and to start to research and experiment with the concept.

For simplicity's sake, let's start by just looking at some examples where we have a trend, and then the trend corrects. I'll choose these examples such that we have a fairly deep correction (not just a small pullback), and then the trend continues. The question on a traders mind might be, 'Will this thing stop correcting and the previous trend re-establish itself, and if so, when?' Let's just look at some simple Fibonacci time retracements like .618 and .786. See figures 11.1-11.3.

**Figure 11.1**

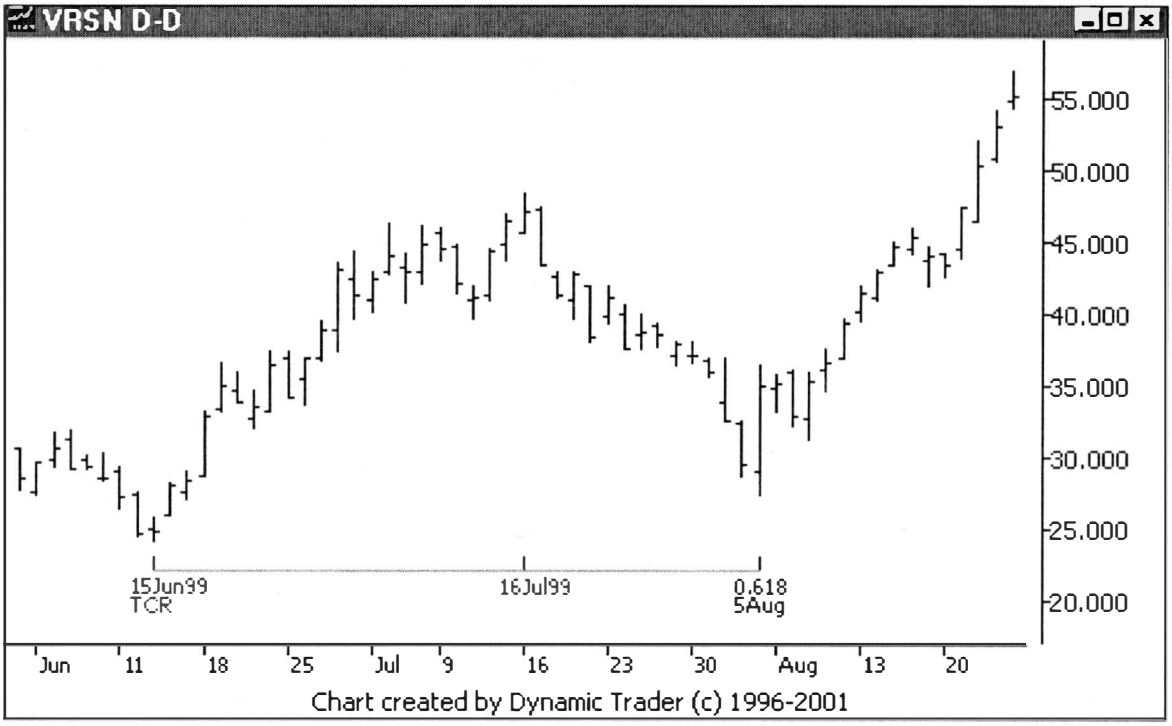



**Figure 11.2**

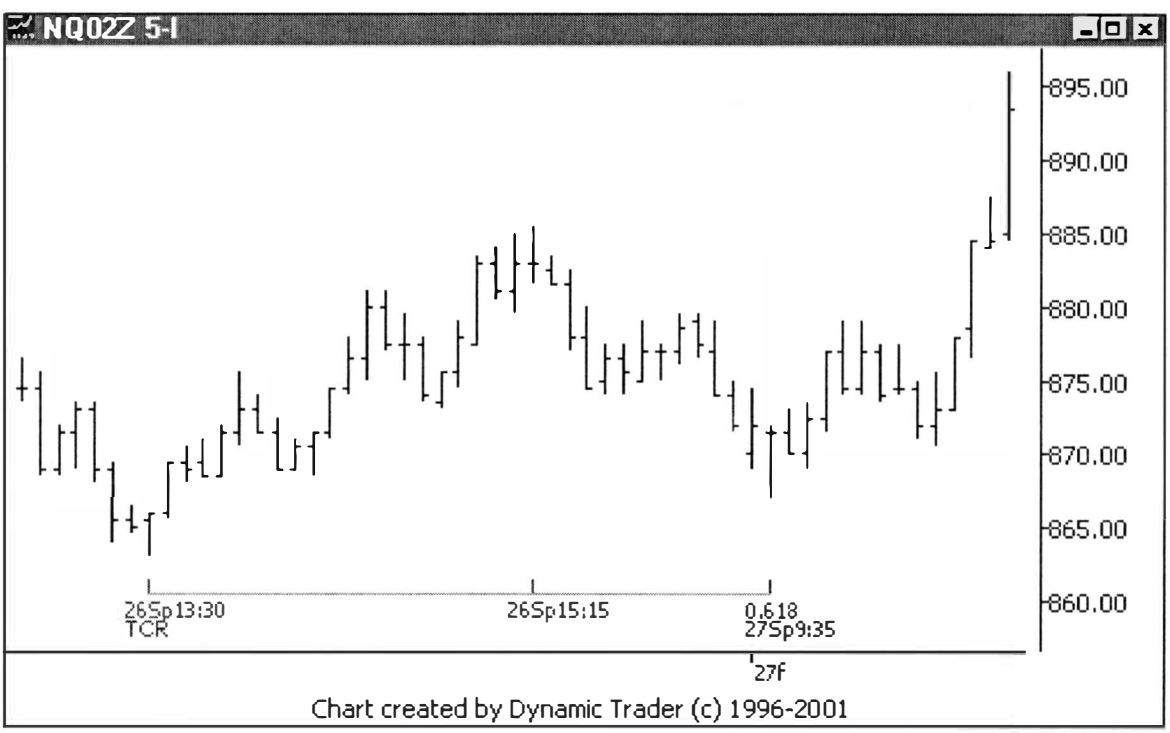
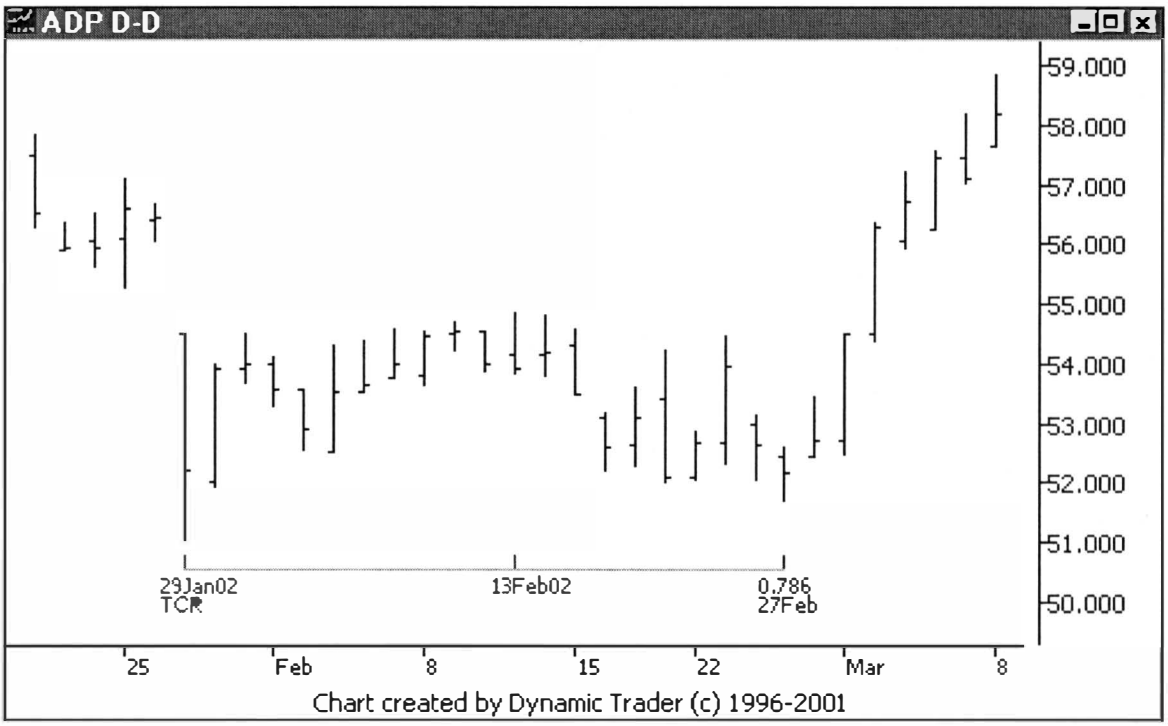


**Figure 11.3**




Let's also look at some Fibonacci time retracements that are greater than 1.000, such as 1.618. See figure 11.4 and 11.5.

**Figure 11.4**

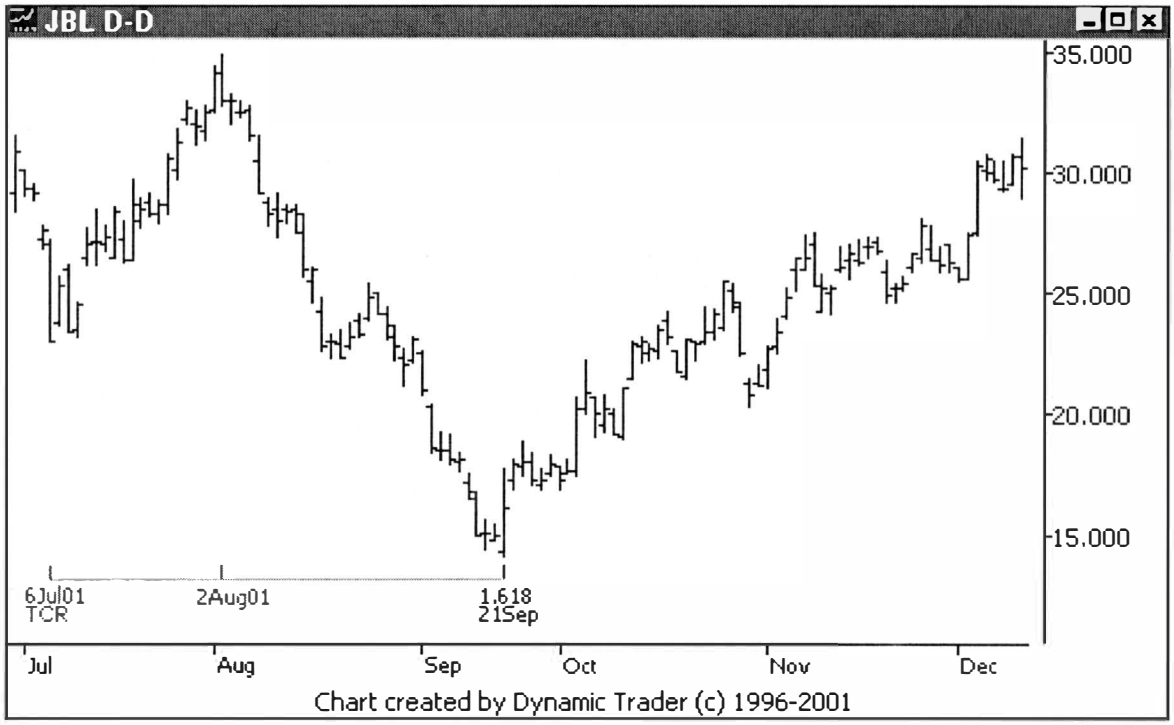
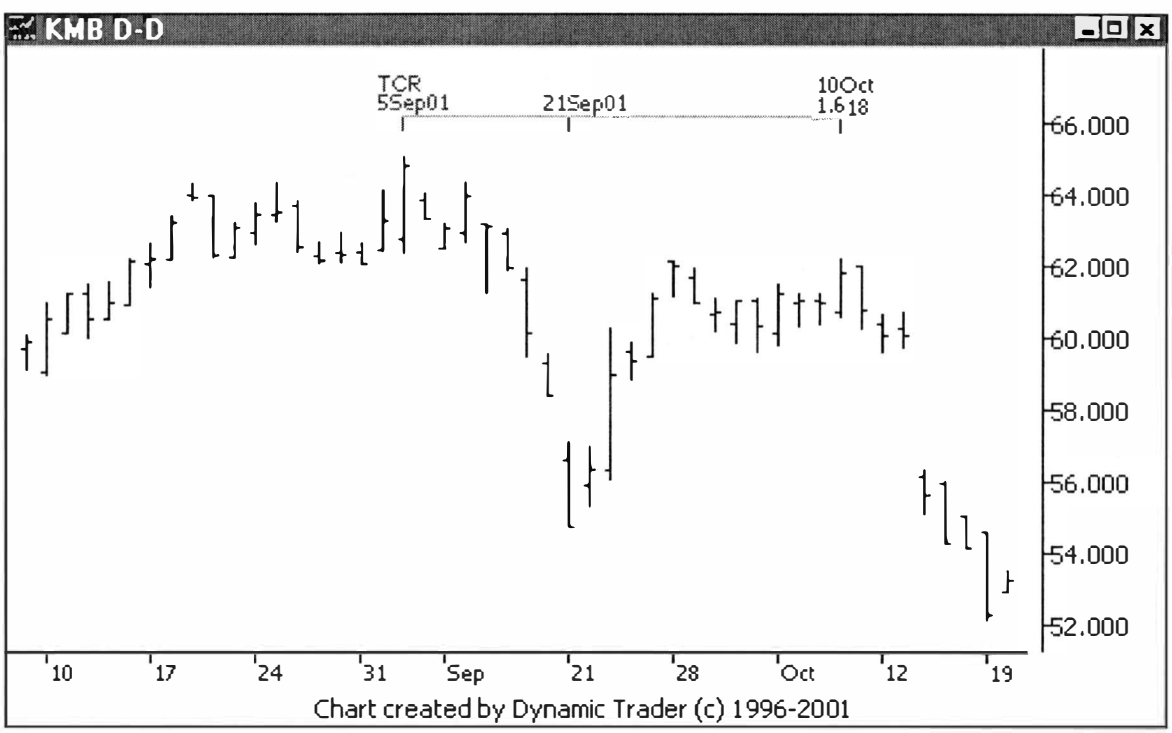


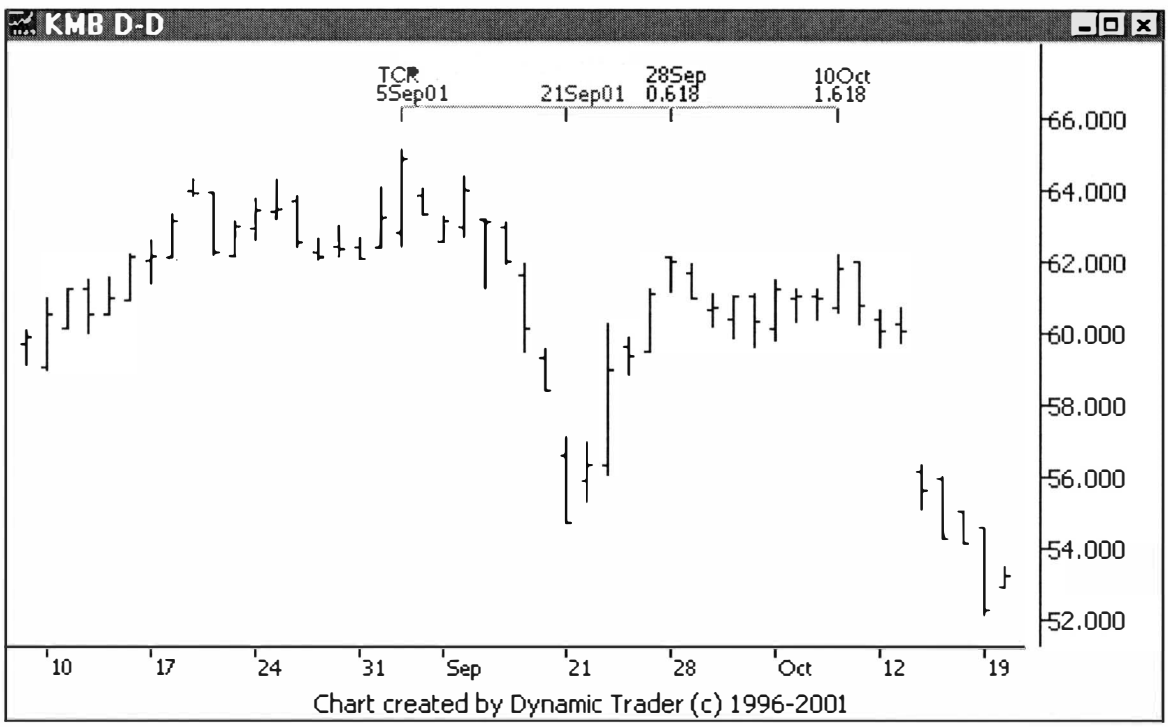

**Figure 11.5**



Notice how KMB, in figure 11.5, is very choppy and discontinuous, yet the pullback ended exactly on a 1.618 time retracement. Also interesting to note is that the chart shows an internal price retracement, whereas the time retracement would be 'external' i.e. greater than 1.000. This example, perhaps, lends credence to the idea of 'giving a trade time to work', as long as the original premise of the trade remains intact.

This chart also provides a test for the reader's eye, and shows how harmonic KMB is trading, despite the choppiness. Do you see it? Let me show you the same chart, with one more time retracement added on. See figure 11.6.

**Figure 11.6**




KMB first ended its price retracement at exactly a .618 time retracement and began to fall off. It then went sideways-to-up, and set a very nominal new high, just twelve cents above the high set at the .618 time retracement. This nominal new high was set exactly at the 1.618 time retracement, and this time the retracement was complete. Although the chart looks very helter-skelter, the stock was actually trading quite harmonically.

In conclusion, let's recall how we've seen many examples of corrections as they approach a Fibonacci price grouping, and have considered a possible trade opportunities. But, what if we also saw this happen at a Fibonacci time retracement? This would seem to strengthen the probability of a zone holding. This would be something a trader might consider when making a decision in a zone. What if an issue went into a Fibonacci price grouping, triggered a trade, *and* it happened at a Fibonacci time retracement?

Now I can hear some readers asking 'Hey, can you do groupings of time, just like with price?' (I hope some of you are saying this. If you are I will feel this work has taught you something!) The answer to the question is 'yes'. Fibonacci price grouping, Fibonacci time grouping, and a trigger. Hmmm. I hope this has you thinking. For now, I will leave it to the reader to experiment with this, and if I do a work on time harmonics it will revolve around time groupings. Also note that the Dynamic Trader software I used for the charts in this work can do many variations of time groupings.

# Conclusion

Don't be discouraged if, after just one reading, you are having a little trouble constructing your own groupings. Go back and re-read the chapters as many times as you have to, until you fully 'get' the ideas. Review the charts until you 'see' it. It may take you awhile to develop proficiency, depending upon how much previous experience you have working with Fibonaccis and retracements, projections, and so on. Keep practicing until you get it, and soon it will be second nature.

Although not necessary, the whole process is quite a bit easier if you have some kind of software specifically designed to do this type of work. In the early days I did it all by hand with a calculator or spreadsheet, putting the lines on the chart individually and 'hand' labeling them. This took a lot of time, and that was time I could have used looking at charts. I would not want to go back to doing it that way. If you decide you like the techniques in this book and want to incorporate them into your trading, give some consideration to obtaining one of the many programs out there that can make it easy on you.

As you review this material, keep in mind what the main concept of the book is. I hope you aren't saying 'Now what was that concept again?' Instead, perhaps you are saying 'Right, I want to use the Fibonacci grouping techniques to find areas of potential support or resistance, where I might consider taking a trade *in the direction of the trend on my traded timeframe.*' If you have just said the latter, or something similar, I will feel that I have succeeded in my presentation of this material.