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How to Master the
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CAROLYN BORODEN

FOUNDER, SYNCHRONICITY MARKET TIMING, LLC

FIBONACCI TRADING

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FIBONACCI TRADING

How to Master the
Time and Price Advantage

CAROLYN BORODEN



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FOREWORD

Most traders have been exposed to some aspect of what we call Fibonacci trading, mostly in reference to Fibonacci price retracements. Traders have been using these retracements for years to help identify their price support and resistance. But Fibonacci retracements are just a beginner's application of these important ratios for trading. It is how you use them in different trading situations that is important. In addition, there are other geometric and harmonic ratios that are equally important that you will learn about in this book.

What most traders have never been taught is how to use these ratios for support and resistance time targets in the same manner as they are used for price targets. When you combine Fibonacci time and price projections as part of a trading plan, you should have a powerful approach to identifying trade opportunities. I don't think there is anyone who is more qualified to teach you about Fibonacci time and price trading strategies than the FibQueen herself (aka Carolyn Boroden).

I first met Carolyn in 1989 at the first *Gann-Elliott Magazine* (since evolved into *Traders World* magazine) conference in Chicago. She was one of the first people to study my Gann Home Study Trading Course, which was first released at that conference. But she wasn't new to the financial markets and trading in 1989. Unlike most trading educators, Carolyn has spent her entire adult life working with the financial markets, from floor runner as a teenager to fund advisor to day-trading mentor. While she has been a relentless student of the markets, she has also had years of practical experience in almost every phase of the trading business.

We kept in contact for several years after 1989, faxing charts, analysis, and trade strategies back and forth between Tucson and Chicago. In 1993, I convinced her to move to Tucson to work with me. She was soon wooed away by an offer to provide analysis and trade strategies for a fund for a whole lot more money than I was paying her, but we have remained friends and associates ever since.

She has been a student of my Dynamic Trading methods for almost 20 years and has used my Dynamic Trading software, which you will see in this book, since Version 1 was released in 1997. There is no better example of a relationship in which the “student becomes the teacher” than that of Carolyn and me. In recent years, I’ve learned as much from her as she did from me in the early years, especially about her symmetry setups and trade strategies, which you will learn in this book.

I’m very proud to have been her mentor in the early years and her friend forever, and I know that her book, which you hold in your hands, will be one of your most valuable reference books for your business of trading.

ROBERT MINER
Dynamic Traders Group, Inc.
Steamboat Springs, CO

ACKNOWLEDGMENTS

I would like to thank my many teachers over the years. First, my mentor, Robert Miner, whom I met at a conference at the Midland Hotel in Chicago just after the market crash of 1987. Others who have contributed to my education over the years include Robert Krausz (who talked me into going to the conference where I met my mentor), Larry Pesavento, Bryce Gilmore, David Patterson, Mark Douglas, and Woodie of woodiescciclub.com.

Thank you to my new business associates John Carter and Hubert Senters and the Tradethemarkets.com team for their help and support in marketing and growing my business.

I would like to thank Richard Karst, aka (RMK), for backing me up in my chat room so that I could sometimes have a life! Thank you, John Haytol, for the computer advice and the vision of a virtual chat room with live charts. I would also like to thank Todd Phillips for helping me implement this vision with computer screen-sharing technologies that have forever changed my chat room. Thanks to Dennis Bolze and Richard Lowrance for believing in me and supporting my work. Thanks to my friend Joe Nicholas of Hedge Fund Research, who must have thought I had “something going on,” since he kept a business file on me! Thank you, William M. Kidder, aka “Uncle Bill,” for giving me a chance to prove myself at DLJ when I was 18 at my first job on Wall Street.

I would also like to acknowledge my friend and client Dr. Firouz Amirparviz, who left us in December 2004. I want to thank him and his family for treating me as if I were part of their family, or, as he called it, for “adapting” me.

Last but not least, I would like to thank the entire King family for their love and support, especially during the task of writing this book. After all, a Queen needs her Kings! This family truly helped me keep my sanity when I overworked myself—almost to the brink of a nervous breakdown. Love you all!

CB
aka Fibonacci Queen

INTRODUCTION

My purpose in writing this book is to give you an introduction to the fascinating world of Fibonacci. It is also to provide you with a very specific trading methodology that can be added to your current list of strategies. For me, this method has continued to identify key trading opportunities in the markets since 1989, and it has never failed me.

Chapter 1 will introduce you to the Fibonacci numbers and the Golden Ratio—the backbone of this methodology. Chapters 2 through 9 will take you through the steps of using Fibonacci on the price axis of the market, including the trade setups that are created with this work. (These are the trade setups that I provide for my clients every day in my live chat room.)

Chapters 10 to 13 explain how to apply Fibonacci to the time axis of the market and then combine this with the price work to find the highest-probability trade setups. Chapters 14 to 16 will help you fine-tune your market entries, ending with an example of a trade setup from analysis to entry. Last but not least, Chapter 17 focuses on trading psychology, discipline, money management, and the importance of having a written trading plan. (The proper psychology will allow you to implement your trading plan, with the discipline to follow the plan along with proper money management techniques.)

Like having a good starting hand in a game of Texas Hold 'Em, this book will teach you how to stack the market odds in your favor.

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FIBONACCI TRADING

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1

C H A P T E R

FIBONACCI NUMBERS AND THE GOLDEN RATIO

For those who are not already familiar with the name Fibonacci, you may remember hearing something about it in 2006, when the movie *The DaVinci Code* appeared in theaters. When Jacques Saunière was found murdered at the Louvre Museum in Paris, the strange position that this deceased character was placed in mimicked the famous painting of the *Vitruvian Man* by Leonardo da Vinci. This painting has been known to illustrate how Fibonacci ratios appear in the human form. The film also piqued the curiosity of some people when the characters in the film started talking about Fibonacci numbers as part of a clue or code of some sort. For myself, I only chuckled and thought, “It’s about time someone is taking Fibonacci seriously.”

The Fibonacci number series and the properties of this series were made famous by the Italian mathematician Leonardo de Pisa. The Fibonacci number series starts with 0 and 1 and goes out to infinity, with the next number in the series being derived by adding the prior two. For example, $55 + 89 = 144$, $89 + 144 = 233$, $144 + 233 = 377$, and so on (see the following number series):

0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, 233, 377, 610, 987 . . . out to infinity

What is most fascinating about this number series is that there is a constant found within the series as it progresses toward infinity. In the relationship between the numbers in the series, you will find that the ratio is 1.618, or what is called the Golden Ratio, Golden Mean, or Golden or

Divine Proportion. (For example, $55 \times 1.618 = 89$, and 144 is 1.618 times 89.) Take any two consecutive numbers in the series after you get beyond the first few and you will find the Golden Ratio. Also note that the inverse or reciprocal of 1.618 is 0.618.

There are quite a few Web sites that are devoted to this number series and its properties. Just type the word *Fibonacci* into your favorite search engine and you'll be amazed at the wealth of information that exists on this subject.

The Golden Ratio can be found in many different places. The 1.618 ratio is used in architecture in what is called the "golden rectangle," as it is known to be pleasing to the eye. There are actually plastic surgeons who use these ratios to help them sculpt faces of "perfect proportion." You can also find the ratio in nature. It can be seen in flowers, the nautilus shell, ammonite fossils, and many other places. What I find to be most fascinating is that this ratio shows up in the pentagram (see Figure 1-1), which is known as a symbol for hidden occult knowledge. It occurred to me that maybe the ratio within the pentagram held a hidden secret to the market!

At one point in my education, I actually studied Jewish mysticism. One of my teachers from a Golden Dawn temple in California handed me a copy of a Disney cartoon called "Donald in Mathmagic Land," saying that I might enjoy it. Another student had brought it to his attention, as Donald Duck had a pentagram inscribed on his hand in this Disney cartoon. In this cartoon, which was produced to teach children about math, Donald Duck was on an adventure in Mathmagic land, where

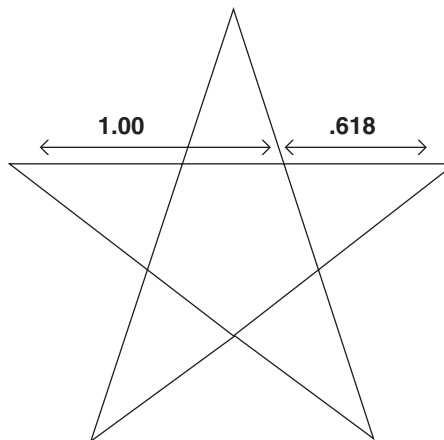


FIGURE 1-1

he visited with Plato and Pythagoras, talked about “secret mathematical societies,” and learned about the Golden Section. The cartoon illustrated where the ratios of 0.618 and 1.618 exist in nature and architecture. This cartoon, which Disney released in 1959, is still available via the Internet, and it is well worth watching. The quote at the end of the cartoon was from Galileo, “Mathematics is the alphabet in which God has written the universe.” I believe this to be true. If you study the “code” of the Fibonacci numbers and the ratios derived from this number series long enough, I think you will begin to agree with, or at least understand, that statement. This is *not* something that should just be blindly accepted because I have found it to be true. It is something that you must discover and then prove to yourself on your own journey!

What is important to *most* traders is that applying these ratios can help identify key support and resistance zones in the market, and therefore determine key trading opportunities or setups. I will show you how to apply these ratios in any market with adequate data. Thus, the application can give you a huge *edge* as a trader, if you use the techniques properly.

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C H A P T E R

APPLYING FIBONACCI RATIOS TO THE PRICE AXIS OF THE MARKET

We will not use the Fibonacci number series to analyze the markets. Instead, we will use the ratios derived from this number series. We've already discussed 1.618 and 0.618 or the Golden Ratio and its inverse. The main ratios I use in my everyday analysis are 0.382, 0.50, 0.618, 0.786, 1.00, 1.272, and 1.618.

I will sometimes also include 0.236, 2.618, and 4.236.

In Chapter 1, you saw how we found the 0.618 and 1.618 ratios within the Fibonacci number series, but what about the rest of these ratios? Well, actually, they are all related mathematically.

For example:

$$1.0 - 0.618 = 0.382$$

$$0.618 \times 0.618 = 0.382$$

$$1.0 \div 2 = 0.50$$

$$\text{Square root of } 0.618 = 0.786$$

0.618 is the reciprocal of 1.618

$$\text{Square root of } 1.618 = 1.272$$

$$0.618 - 0.382 = 0.236$$

$$0.382 \times 0.618 = 0.236$$

$$1.618 \times 1.618 = 2.618$$

$$2.618 \times 1.618 = 4.236$$

Now what do we do with these ratios and how do they help us trade?

We will find our trade setups or trading opportunities by applying the main Fibonacci ratios on the price axis of the market. There are three basic trade setups that I use in my chat room every day: (1) price cluster setups, (2) symmetry setups, and (3) two-step pattern setups.

Author Tip

This type of Fibonacci price analysis can work well in any market and pretty much on any time frame, as long as there is adequate data and you can identify key swing highs and lows on the chart. Do not attempt to use this type of analysis on something like a penny stock, where you can't identify any meaningful swings, or in a market with minimal data available. In such cases, this technique will have no value.

TOOLS OF THE TRADE

Since you are looking into this type of technical analysis, I am assuming that you have a computer; a market data source such as e-signal, quote.com, or Genesis Financial data; and a technical analysis program to manipulate the data. You *can* do some of this work by hand with paper charts and a calculator or a proportional divider, although it is tedious and not practical. (While I started the technical analysis phase of my career using those old-fashioned tools, I do *not* recommend that to anyone, given all the wonderful technology that is available today.)

The technical analysis program that I primarily use to run my time and price work is Dynamic Trader, with an e-signal feed as my data source. There are other programs that will run at least the price analysis work, though there are only a few that have both the proper price and time tools you will need if you choose to analyze both dimensions of the market.

Unless otherwise specified, most of the chart examples in this book are produced with the Dynamic Trader software. Also note that some of the charts may appear “fuzzy,” or you may feel that you can't read the prices very clearly. Don't worry; I did not use a bad graphics program to capture these chart illustrations. This happens because the price relationships are clustering and essentially overlapping one another, making the chart levels difficult to read. This is something that we actually *want* to see happen. This will all make sense to you by the time you get through the first half of this book.

FIBONACCI PRICE RELATIONSHIPS

We start by running three different types of Fibonacci price relationships to find our trade setups. These are *retracements*, *extensions*, and *price projections* (sometimes called *price objectives*). First we will look at each of these types of price relationship individually. Later, we will be putting them together while we look for our trade setups. Each of these price relationships will be setting up potential *support* or potential *resistance* in the chart you are analyzing.

The definition of *support* is a price area below the current market where you will look for the possible termination of a decline and where you would consider being a buyer of whatever market you are analyzing. You might be looking to buy at or around support either to initiate a new trade on the long side *or* to exit a short position if you think the support may hold and the market won't decline any further.

The definition of *resistance* is a price area above the current market where you would look for the possible termination of a rally and consider being a seller. You might be looking to sell at or around resistance to initiate a new trade on the short side *or* to exit a long position if you think the resistance may hold and the market won't go any higher.

In the next three chapters, you will discover the types of price relationships that are necessary for running your analysis. Please do not get overwhelmed with the information I am presenting throughout this book. Be patient with yourself. If you start by applying one concept at a time, you will be well rewarded for your perseverance.

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3

C H A P T E R

FIBONACCI PRICE RETRACEMENTS

Fibonacci price retracements are run from a prior low-to-high swing using the ratios 0.382, 0.50, 0.618, and 0.786 (0.236 is also used in some cases if the swing is relatively long) to identify possible support levels as the market pulls back from a high. Retracements are also run from a prior high-to-low swing using these same ratios, looking for possible resistance as the market bounces from a low.

Most basic technical analysis packages will run the retracement levels for you when you choose the swing you want to run them from and select the proper Fibonacci price tool within the program you are using. If you want to understand the math, however, multiply the length of the swing (from low to high or from high to low) by the retracement ratios and then subtract the results from the high if you are running low-to-high swings, or add the results to the low when you are running high-to-low swings.

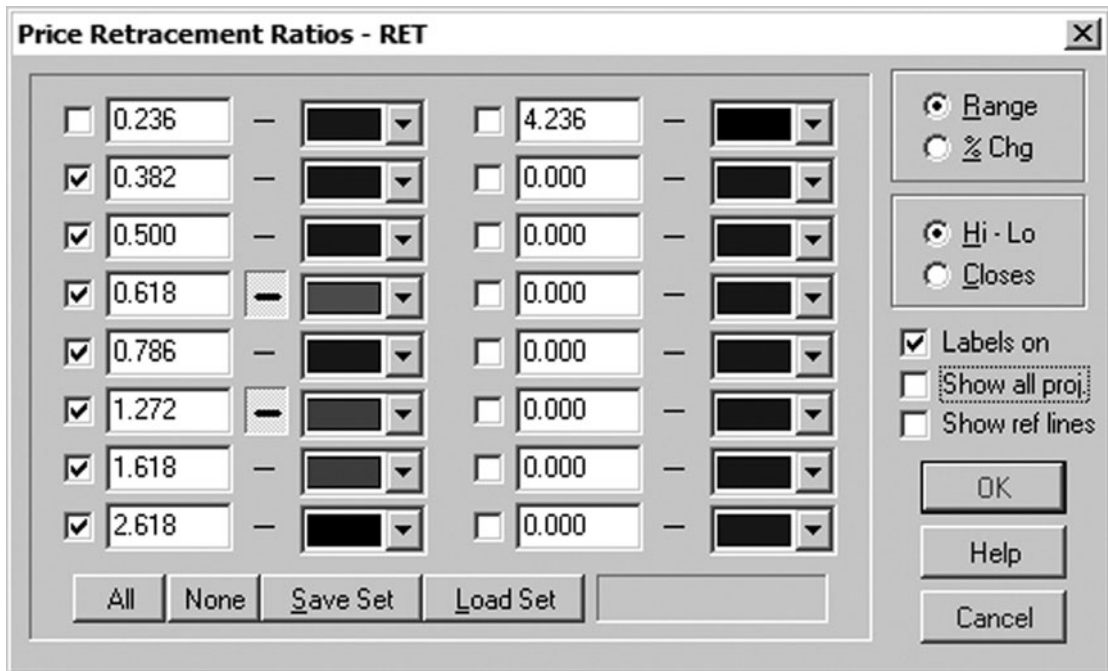


FIGURE 3-1

Figure 3-1 shows you the Price Retracement/Extension tool setup on Dynamic Trader that I have used to run the following price retracement examples. Note that I have selected in the setup box the ratios that I will be using to run both price retracements and price extensions (which will be illustrated in the next chapter). The same tool is used because both retracements and extensions are run from two points on a chart—either a high to a low or a low to a high. Since the mathematics of the program uses only these two points, we can use the same tool to run the price extensions of prior swings.

Note: All price retracements on the Dynamic Trader chart examples will be labeled as RET for retracements by the program.

Now that you have an idea of the type of Fibonacci tool you might use for your work, let's go through some retracement examples to help you understand what you might look for on a chart. Figure 3-2 is an example of the daily gold futures February 2007 contract. We ran the Fibonacci retracements from the 10/4/06 low to the 12/1/06 high, which was an 86.90-point swing, looking for potential support. Notice that this contract found support only around the 0.618 retracement of this prior swing. None of the other ratios provided any meaningful support.

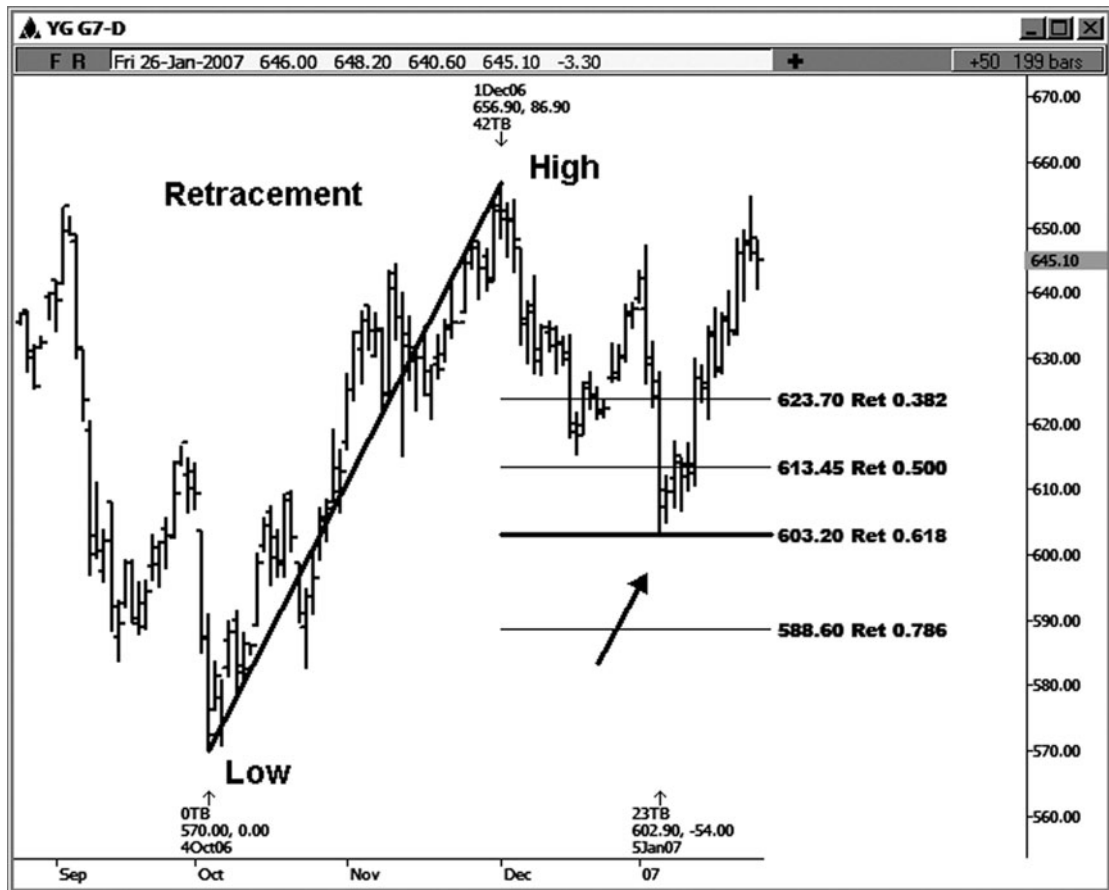


FIGURE 3-2

This next retracement example is on a FOREX chart. My experience in this business has mostly been in the futures industry, including commodities, with a focus on the financial futures markets. I have also found this type of analysis valid for cash indexes, individual stocks, and the FOREX markets. On the daily euro chart (see Figure 3-3), we ran the retracement of the 12/4/06 high to the 12/18/06 low, looking for possible resistance levels. In this case, the euro found resistance first at the 0.618 retracement and then at the 0.786 retracement of that same swing.

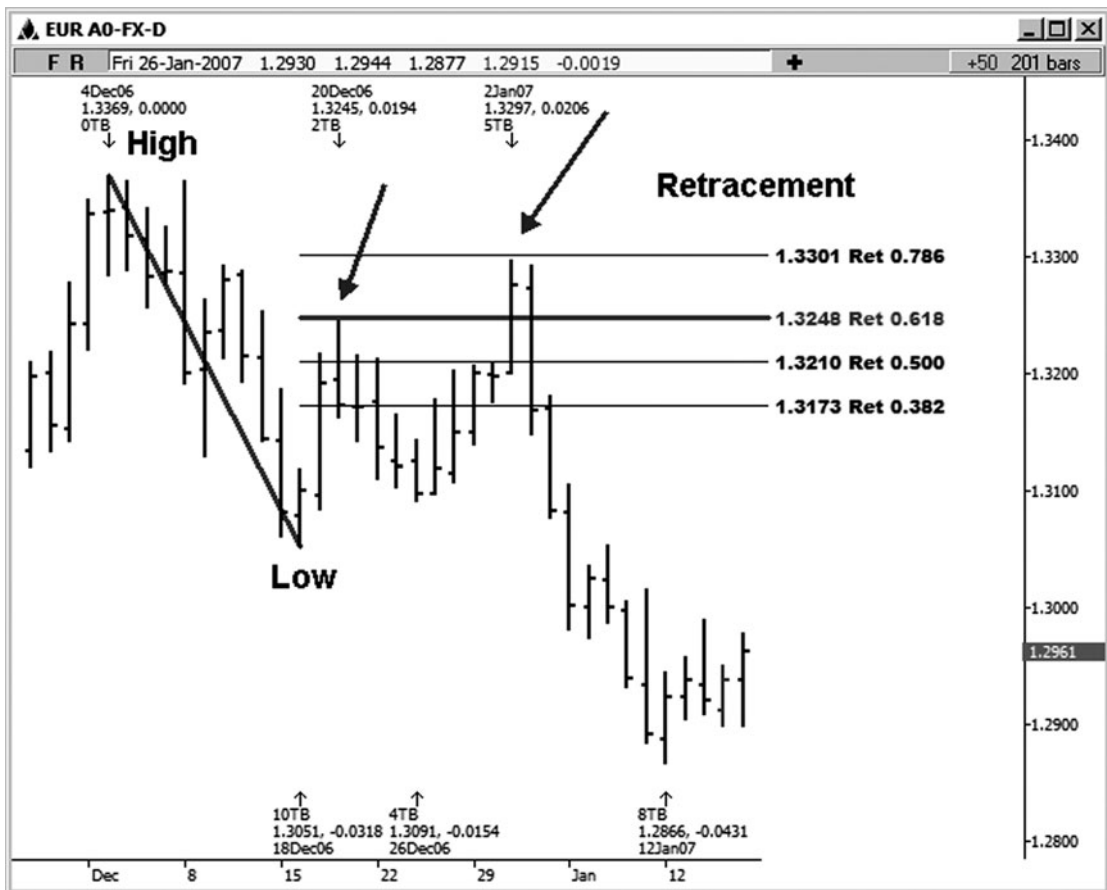


FIGURE 3-3

Our next retracement example is on a 15-minute mini-sized Dow chart (see Figure 3-4). Here the retracement was run from the high made on 1/17/2007 at 1:15 p.m. central time to the low made on 1/19/2007 at 8:45 a.m. central time. Here we were looking for possible resistance on the way back up from the 1/19 low. Notice that there are multiple swings within the larger swing that we measured for these price relationships. In later examples, we will run multiple retracements from these multiple swings. In this example, there was a minor move off the 0.382 retracement on the way up, but a much more important reversal against the 0.618 retracement level.

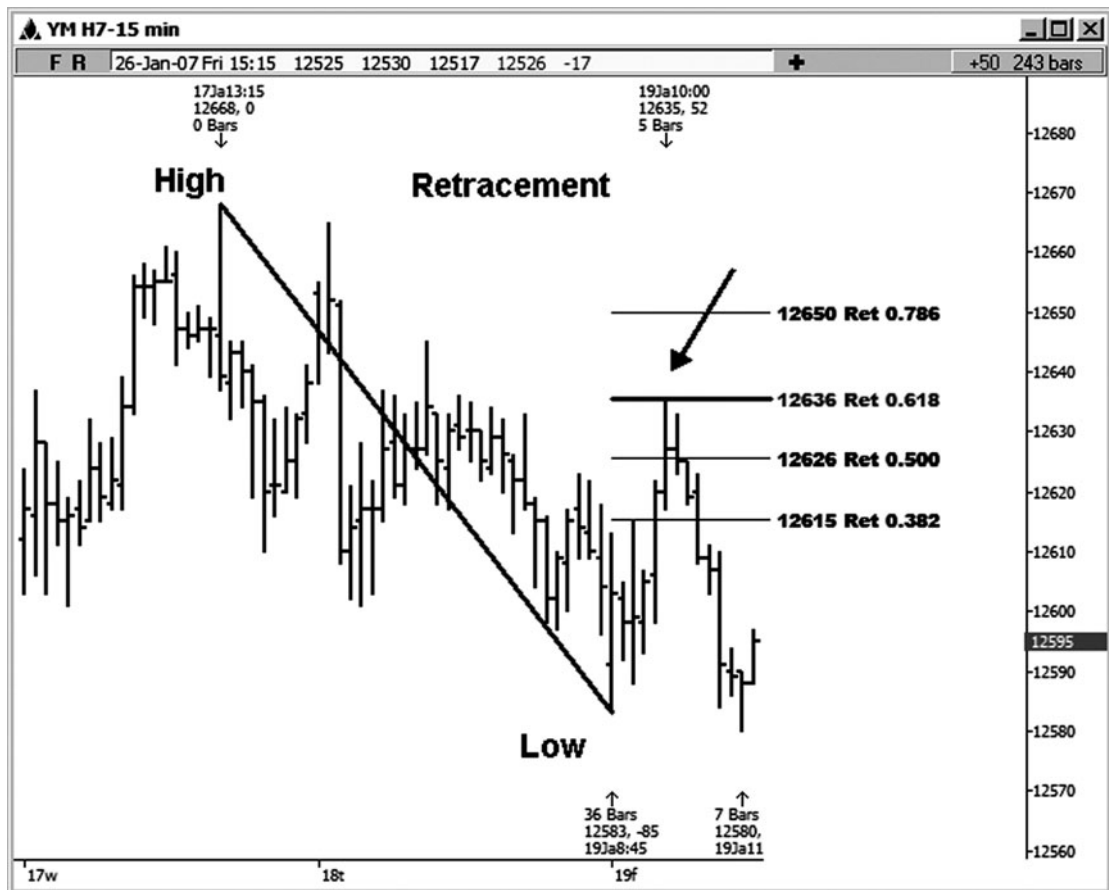


FIGURE 3-4

Figure 3-5 is another retracement example in the mini-sized Dow contract on a 45-minute chart. This is an example of a swing that is long enough (243 points) to include 0.236 in the retracement levels projected. Here we were looking for potential support. In this case, we saw a minor bounce off the 0.236 retracement, then a more healthy move off the 0.382 retracement. This example also illustrates that we will not always see perfect hits of Fibonacci levels. As long as they are relatively close, however, they are still considered valid.

Relatively close is generally 3 to 4 ticks in price above or below the actual projection level. For example, in this case, the low of 12482 made near the 0.382 retracement was 4 ticks below the actual retracement level of 12486. In some other markets, such as FOREX, I might allow a little

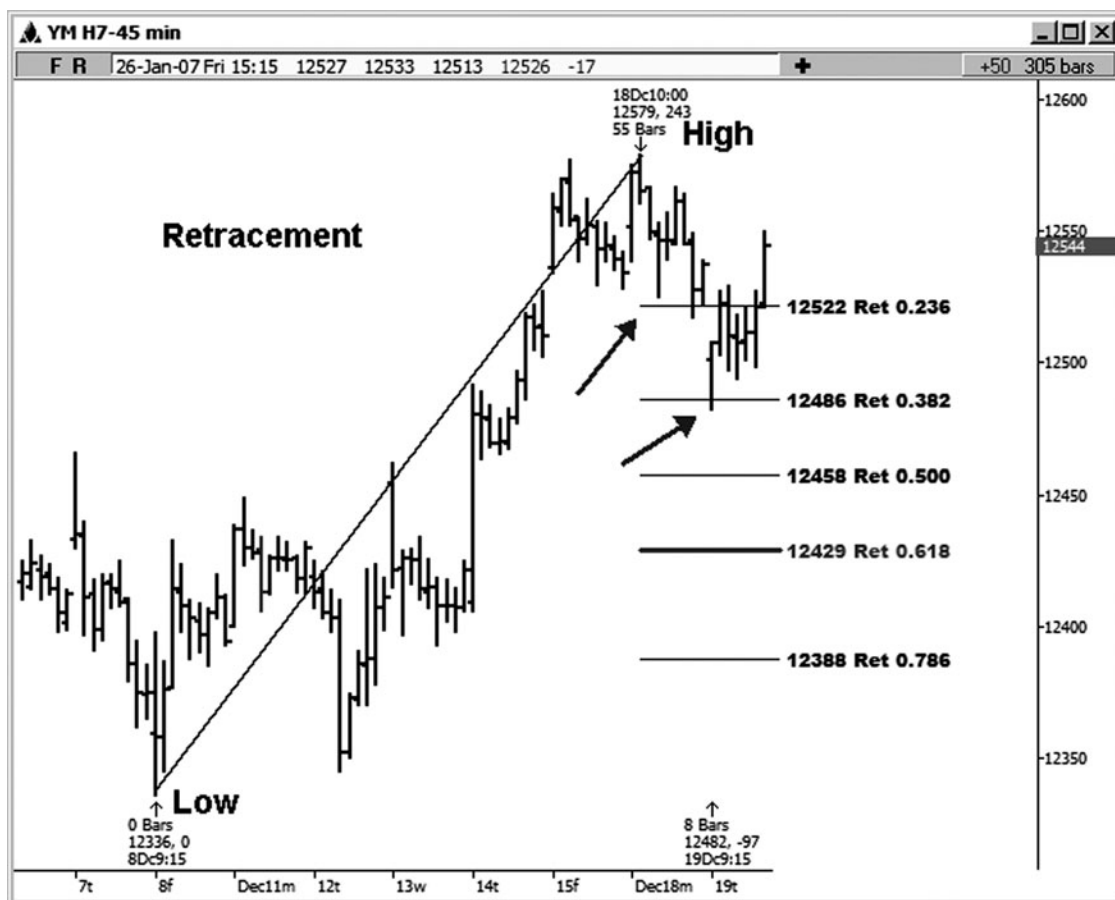


FIGURE 3-5

bit more leeway, especially if you are running the retracements from a rather large swing.

Author Tip

As a rule of thumb, a good way to judge whether or not a level should still be considered valid is to just look at the chart you are analyzing. If you don't see a glaring violation or shortfall of the level, I would still consider it valuable and leave it on the chart.

This next retracement example is on a daily chart of Microsoft (see Figure 3-6). Here we retraced the move from the 11/15/04 high at 27.50 to the 3/29/05 low at 23.82 looking for possible resistance on the way back up. Note that the 0.618 retracement was the only one that produced



FIGURE 3-6

a change in trend on this chart. The high was made exactly at the retracement at 26.09. You can't always expect perfect hits using these price relationships. However, don't be surprised when it happens!

Our next retracement example is on a daily chart of Google stock (see Figure 3-7). Here we measured a swing from high to low looking for possible resistance. The retracement was from the 1/16/07 high of 513.00 to the 3/5/07 low at 437.00. A key high was made just a touch below the 0.382 retracement back to this high.

Looking more closely at this chart, you should notice that there are smaller swings within the larger swing that we measured. We can take these smaller swings and also run Fibonacci retracements that could end

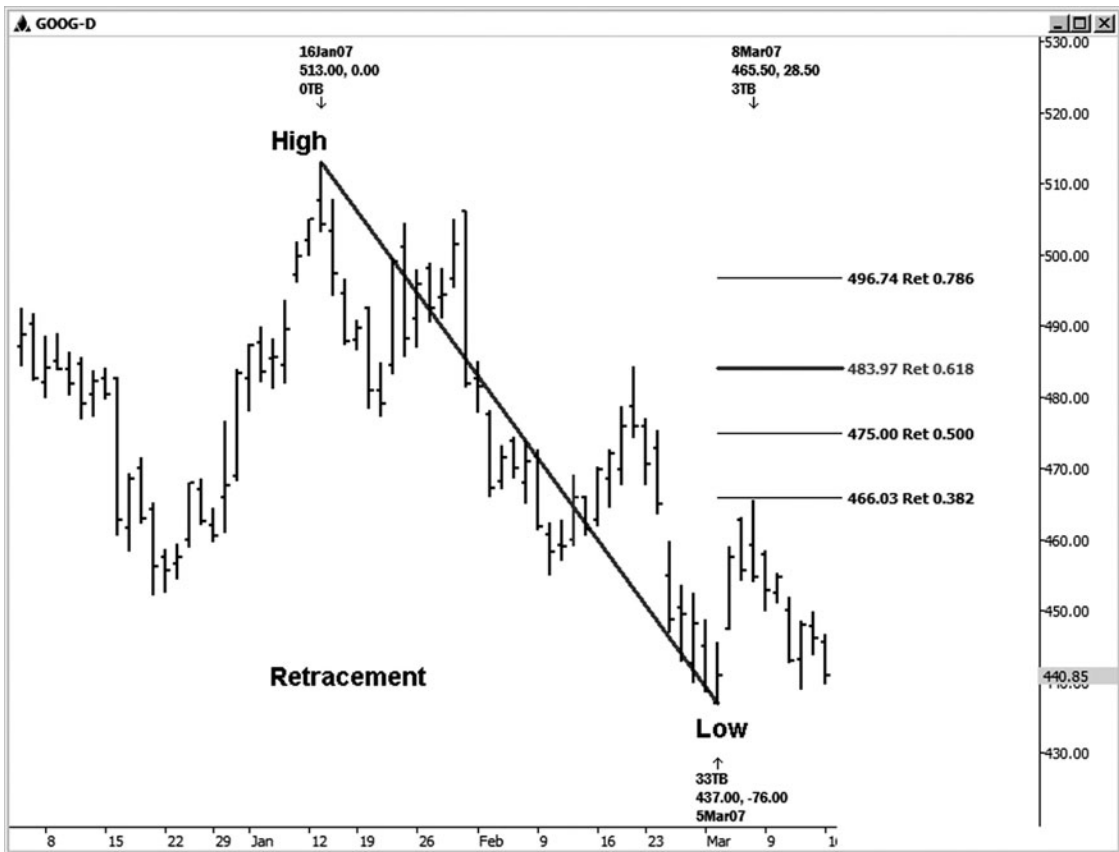


FIGURE 3-7

Let's look at another daily Google chart in Figure 3-8 and see how another retracement could be run from a swing within the larger swing that was retraced on the prior chart. This time we took the move from the 2/22/07 high at 484.24 to the 3/5/07 low made at 437.00. In this case, the 0.618 retracement at 466.19 produced a turn that just happened to overlap the 0.382 retracement at 466.03 from the prior chart. The actual high was made at 465.50—close enough for government work.



There were actually a couple of other price relationships that overlapped this area that you will learn about as you move forward in this book. With such a healthy confluence of price relationships that could be identified in advance, this work would have definitely warned the trader of an impending reversal to the downside from the 3/8/07 high!

Figure 3-9 is a retracement example in which we are looking at a daily FOREX chart of the British pound. Measuring from the 6/29/06 low to the 8/8/06 high looking for possible support, the only retracement that produced a change in trend was the 50 percent mark. This was not a perfect hit, but it was close enough to watch for reversal indications. Another important low was made above the 0.618 retracement. Though that was

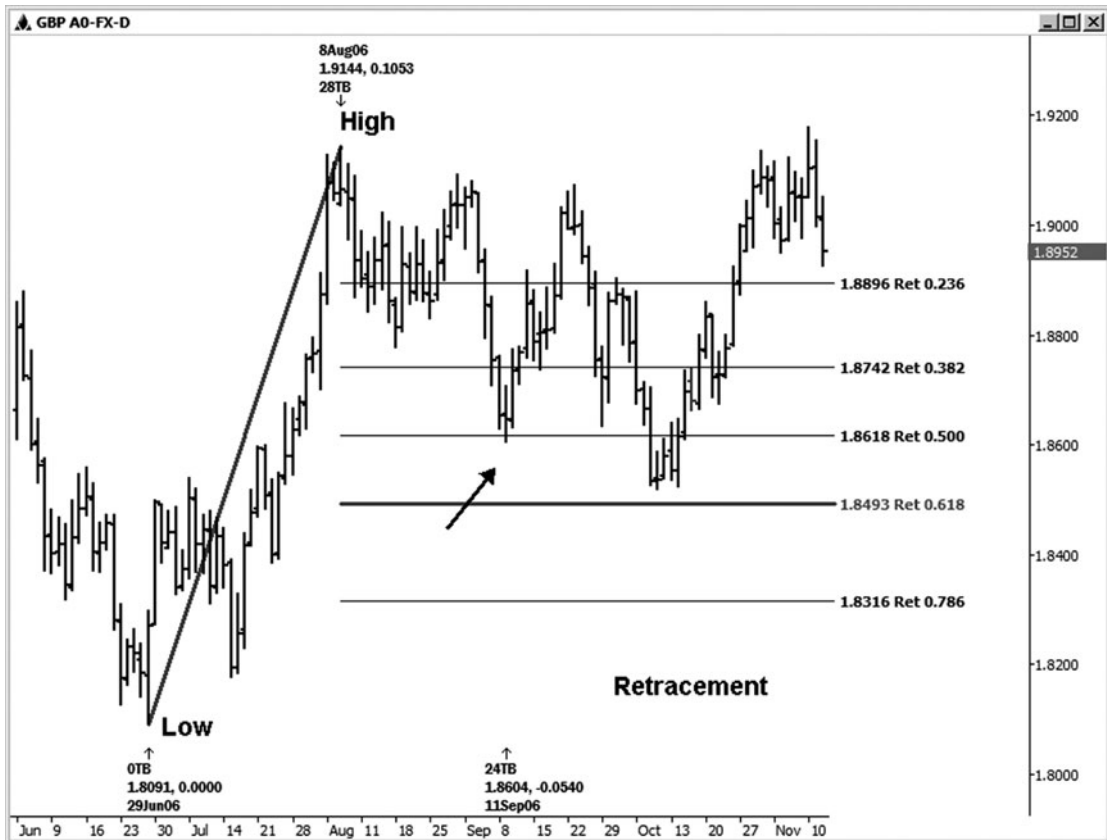


FIGURE 3-9

not really close enough to be considered a hit, it still doesn't hurt to be aware of this important retracement of a major swing.

In this next retracement example, Figure 3-10, we are looking at a General Motors daily chart and running the retracements from the 4/5/06 low to the 9/13/06 high, looking for possible support on the pullback. In this case, we saw only a minor pullback to the 0.236 retracement before the rally resumed in this stock.



FIGURE 3-10

This next retracement example is on a 15-minute E-mini Nasdaq futures chart (see Figure 3-11). We measured from the 1822.25 swing high to the 1789.00 swing low, looking for possible resistance on the way back up. On this chart, we saw only a decent reaction off the 0.618 retracement back to the high. The retracement came in at 1809.55. The actual high was made just a touch below this, at 1809.00.



FIGURE 3-11

Figure 3-12 is a daily chart for the 3M company. It shows where we retraced from the 7/25/06 low to the 9/19/06 high, looking for possible support. In this case, the stock pulled back to the 0.382 retracement, and then the rally resumed.



FIGURE 3-12

Let's look at another example of a retracement on a 15-minute chart of the E-mini Russell contract. In Figure 3-13, we measured from the 815.60 high to the 796.80 swing low to look for possible resistance on the way back up. In this case, we saw only a reaction at the 0.786 retracement. The price actually fell short of this level by 2 ticks, but that is close enough. A healthy decline followed this retracement high.



FIGURE 3-13

CORRECT RETRACEMENTS

One of the ways in which you are going to create Fibonacci price cluster setups is by running retracements on multiple swings on the chart you are analyzing. Over the years, I have watched my students make mistakes by

using some of the wrong swings in their analysis. I'm hoping that the following examples will show you how to avoid the same kind of errors.

In Figure 3-14, we are looking at a daily chart of Home Depot. I have identified a number of swings that could be used for our analysis in terms of running possible support zones. When running retracements of low-to-high swings, you need to run them from the lows to the highest high on the chart. For example, in this chart, besides running them from the 10/20/06 low to the 1/3/07 high, you could also run the ratios from the higher lows to the 1/3/07 high. The other swings I would run would be from the 11/14/06 low to the 1/3/07 high, the 11/28/06 low to the 1/3/07 high, the 12/12/06 low to the 1/3/07 high, and the 12/26/06 low to the 1/3/07 high. All of these swings would have value in setting up possible

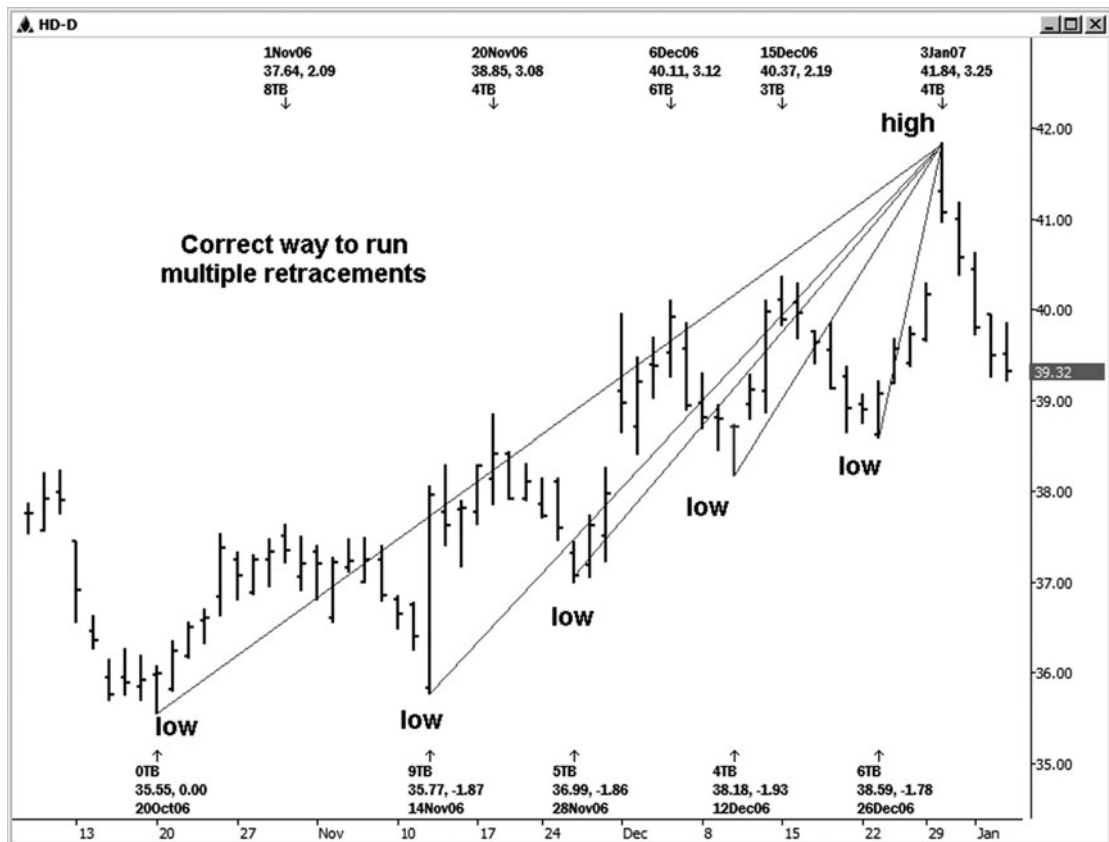


FIGURE 3-14

support as the market declined from the 1/3/07 high. When you run multiple price retracements, you will notice that some of these levels will overlap nicely. (This is what we want to see.)

INCORRECT RETRACEMENTS

In Figure 3-15, on this same chart of Home Depot, I am illustrating some of the swings that would *not* have value in defining possible support as we trade down from the 1/3/07 high. The swings illustrated may have had value for running possible support at *other* times, but they would not be relevant to the current market analysis. In other words, running a retracement from the 10/20/06 low to the 11/20/06 high would not be relevant



FIGURE 3-15

to the current market, where we are looking for support on a pullback from the 1/3/07 high. It would have been relevant when you were looking for support on a pullback from the 11/20/06 high. Once the 11/20/06 high was exceeded, however, you would have to use the new high at that time to run the possible support. Following that reasoning, using the 11/14/06 low to the 12/15/06 high or using the 11/28/06 low to the 12/15/06 high would not have been relevant to the current market analysis, although it would have been relevant before the 12/15/06 high was exceeded. I am hoping these visual examples are getting my point across.

CORRECT RETRACEMENTS HIGH TO LOW

Let's take a look at an example in the mini crude oil contract that shows the proper way to run multiple retracements for possible resistance from the 10/31/06 low. When retracing high-to-low swings, just remember to take all your highs and retrace from the lowest low, which in this case was the 10/31/06 low. You always want to use at least the distance from the highest high to the lowest low. Then, to add multiple retracements, use the distance from the lower highs to the lowest low. In Figure 3-16, you can see that all of the following swings were relevant to projecting possible resistance for the current market at that time.

7/17/06 high to 10/31/06 low

8/8/06 high to 10/31/06 low

8/25/06 high to 10/31/06 low

9/28/06 high to 10/31/06 low

10/17/06 high to 10/31/06 low

There is one more minor swing that could have been used in this case, but the high was only slightly lower than the 10/17/06 high. Since the highs are relatively close, it's almost redundant, although you can still choose to use it. Running all the retracements listed here would identify areas of possible resistance to the rally that started from the 10/31/06 swing low. If this low was violated, however, the retracements would have to be run all over again from the new lower low.

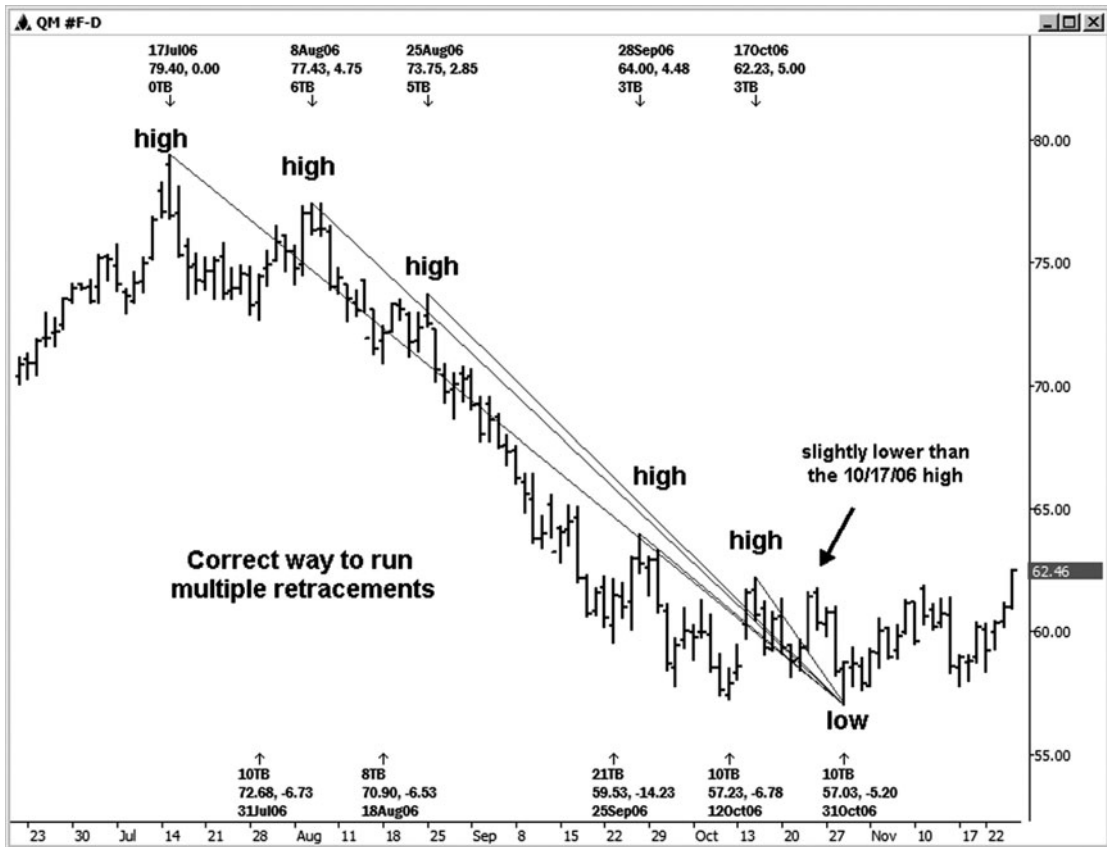


FIGURE 3-16

This second chart on the crude oil contract, Figure 3-17, illustrates some swings that would *not* have been relevant to the current market activity at that time because they were not being run from the lowest low made on 10/31/06. For example, running the retracement of the 7/17/06 high to the 9/25/06 low would have no value for the current analysis, since the 9/25/06 low had been exceeded. It would have had value when the 9/25/06 low was the lowest low, however. The other swings that would not have had value would be the 8/8/06 high to the 9/25/06 low and the 8/25/06 high to the 10/4/06 low, since the 10/31/06 low was the lowest low at the time of the analysis.

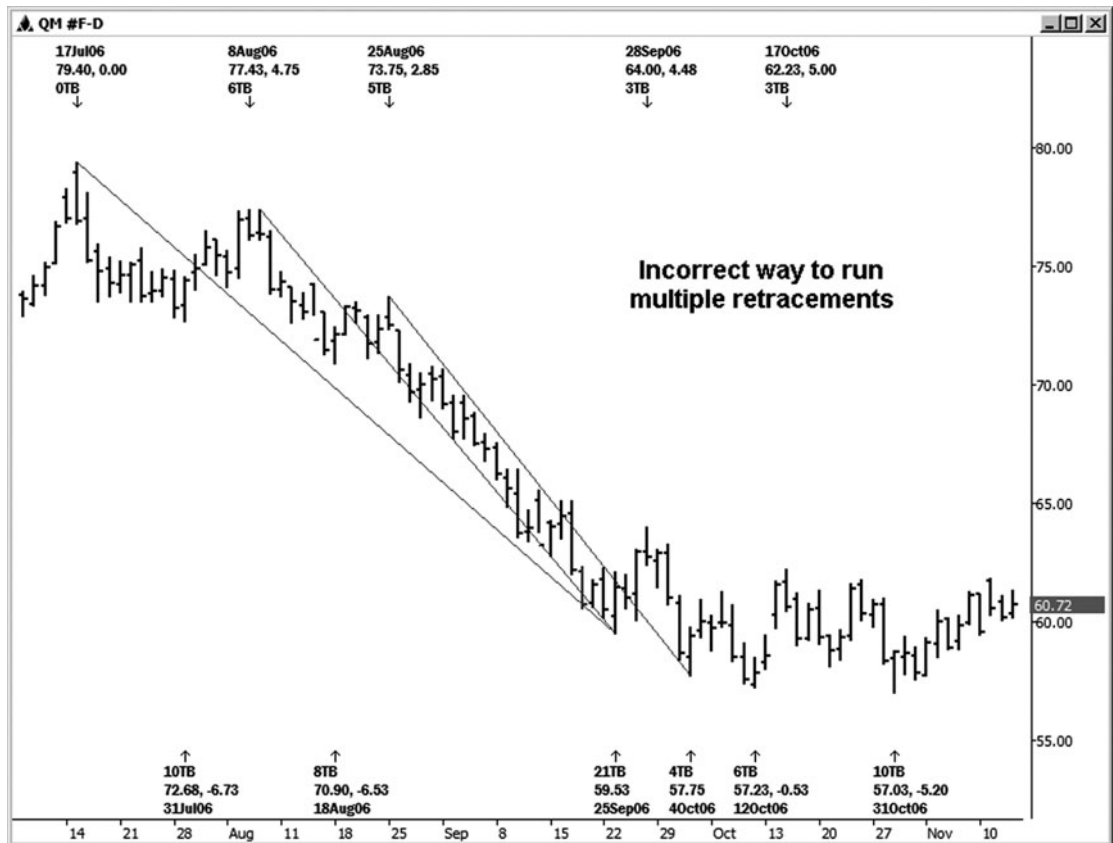


FIGURE 3-17

Before I move on to Fibonacci price extensions, I want to address a question that I am asked in almost all of my presentations. I'm always asked if old Fibonacci support levels become new resistance or if old resistance becomes new support. The answer is *no*; that is simply not part of the methodology. There are times where it will seem that this is the case, as a market will tend to pull back to a price zone after that zone is violated. The more accurate way to find new support and resistance levels, however, is to run the new levels that are created by the most recent price activity. We have to treat this market as a dynamic, living, and growing thing and continue to analyze it as such.

4

C H A P T E R

FIBONACCI PRICE EXTENSIONS

In this chapter, I will show you multiple examples of Fibonacci price extensions, which are also run to set up possible support or resistance parameters for whatever market you are analyzing. Fibonacci price extensions are similar to price retracements, in that they are also run from prior lows to highs or from prior highs to lows, using only two data points to run the price relationships. The only difference is that with retracements, we are running the relationships of a prior swing that are less than 100 percent, or *retracing* the prior move, whereas with extensions, we are running the relationships of a prior swing that are *extending* beyond 100 percent of it. Even though you will more than likely be using the same price tool from your trading analysis program, these techniques are named differently to indicate whether the price relationship is occurring within the prior swing or extending beyond it.

Extensions are run from prior low-to-high swings using the ratios 1.272 and 1.618 for potential support. They are run from prior high-to-low swings using the ratios 1.272 and 1.618 for potential resistance. You may also add the ratios 2.618 and 4.236. I will use 2.618 as the third target for a trade setup, but I will look at 4.236 only if I am looking at a very extended move in a market and trying to look for a place where it might finally terminate.

I used the same Dynamic Trader tool shown in the retracement chapter to run the following price extension examples. Most analysis programs will run extensions from the same program tool, since they are also measured using only two price points on the chart. The math is the

same, with the only difference being that retracements are defined as less than 100 percent of a prior swing and extensions are defined as beyond 100 percent of a prior swing.

Note: What I call price extensions in my work are labeled EX Ret on the Dynamic Trader charts that you will see in the following examples. Robert Miner, my mentor, refers to these as external price retracements rather than price extensions.

Our first price extension example is illustrated on a daily Russell cash index chart (see Figure 4-1). The 1.272 and 1.618 extensions were run from the 4/21/06 high to the 4/27/06 low for possible resistance to the rally that started with the 4/27/06 low. In this case, knowing where the 1.272

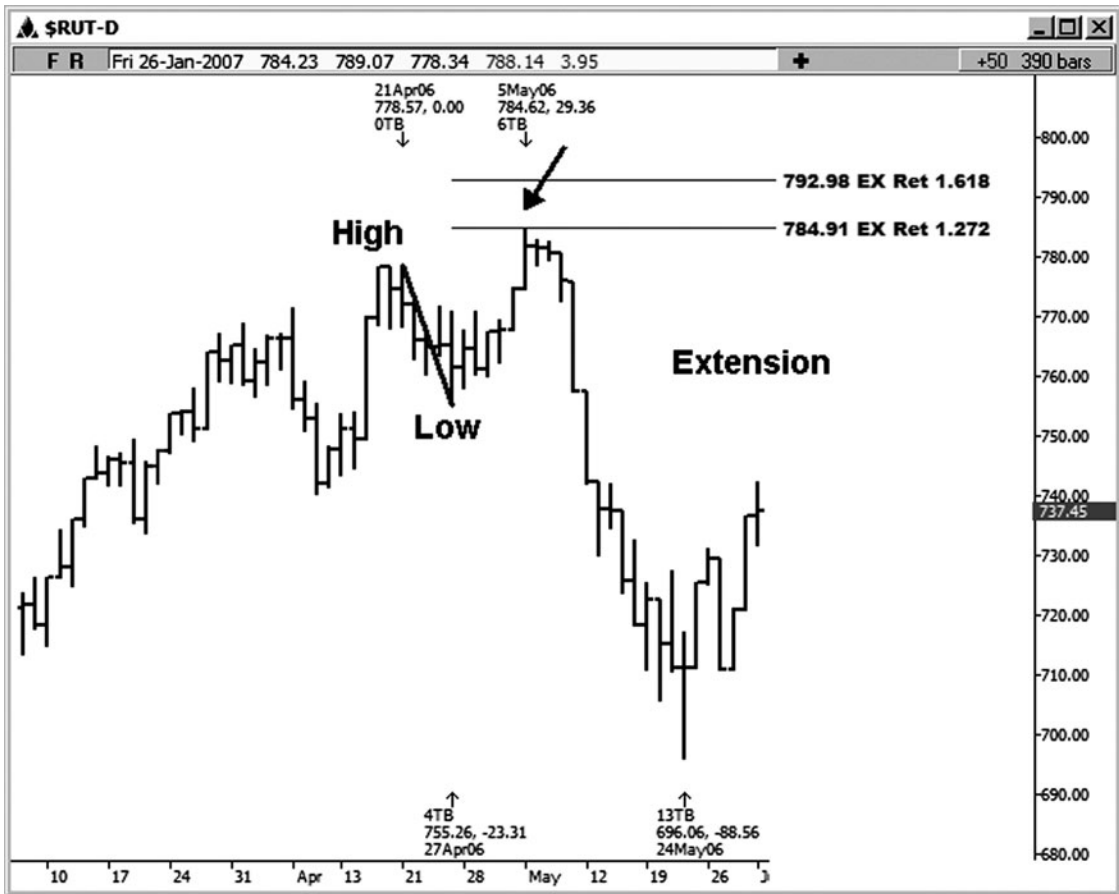


FIGURE 4-1

extension was would have been extremely valuable to a trader, as a very healthy decline followed a test of this resistance.

This next price extension example is illustrated on a 60-minute crude oil futures chart (see Figure 4-2). Here we measured from the low made at 51.58 on January 12, 2007, to the January 15, 2007, high made at 53.38 and ran the 1.272 and 1.618 extensions for possible support. Note that an important low was made within ticks of the 1.618 extension, where a rally of over 2.00 was seen! One thing I have learned by using price extensions over the years is that many moves tend to terminate—if only temporarily—at these extensions.

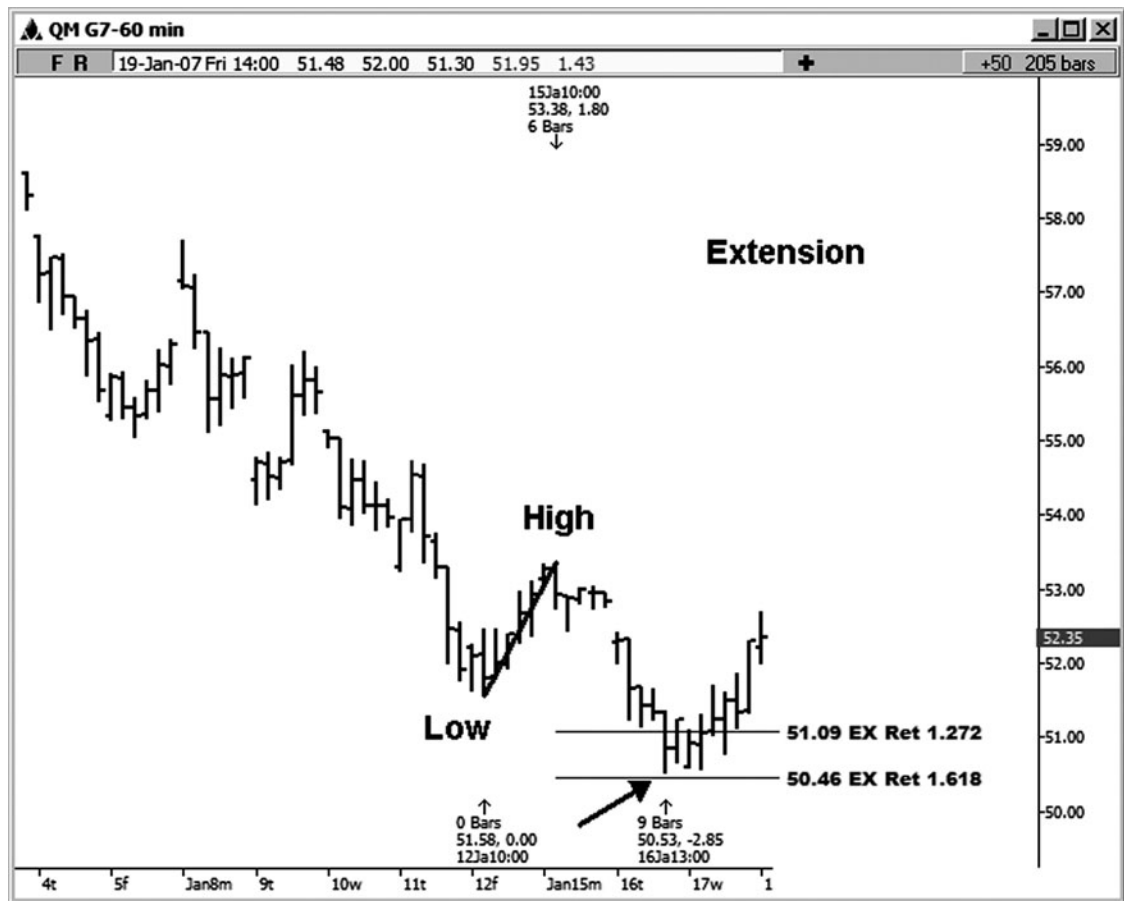


FIGURE 4-2

Let's look at another price extension example, this time on the mini-sized Dow. In Figure 4-3, we ran the high-to-low swing on this 15-minute chart to look for possible resistance on the way up. Notice that there was a minor decline off the 1.272 extension and then another minor decline off the 1.618 extension. The contract eventually rallied beyond both of these levels. This was not that unusual, since we were in a healthy uptrend, but these levels did offer some temporary resistance to the move, which is why as a trader you want to be aware of them.

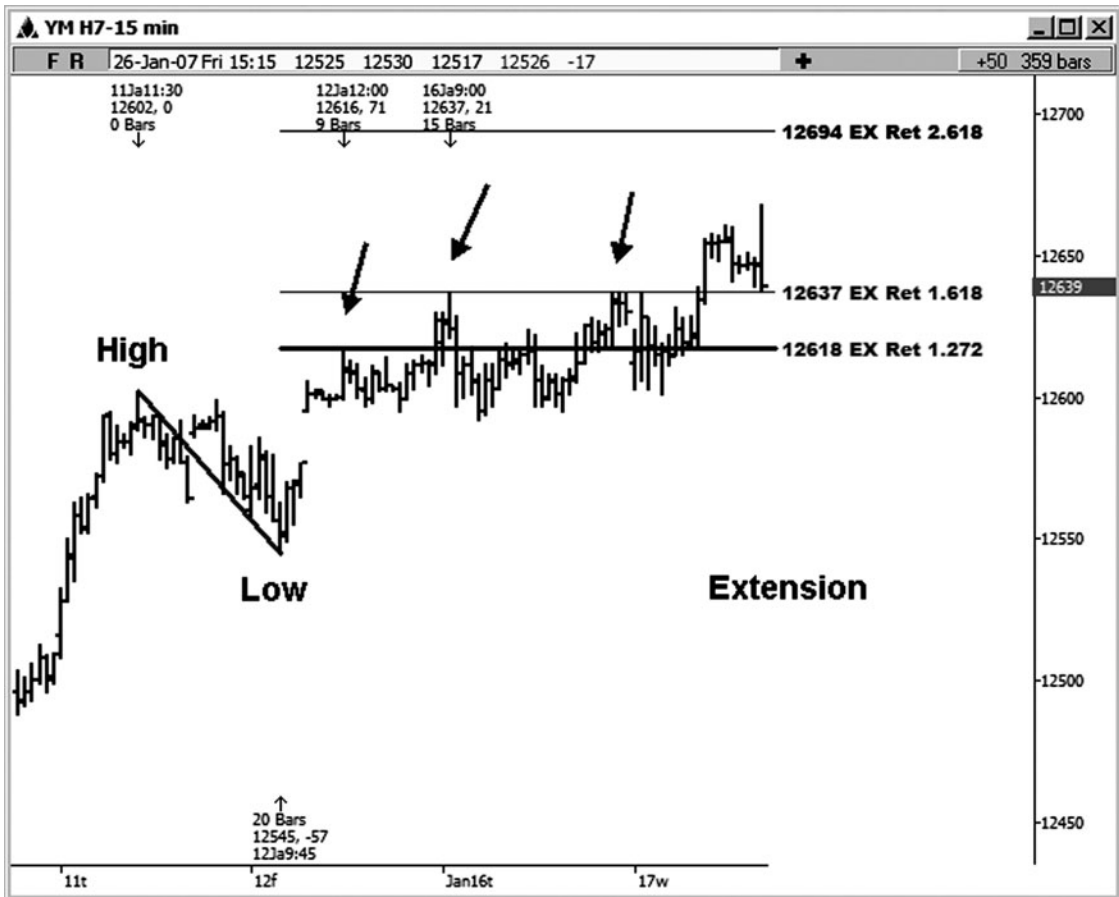


FIGURE 4-3

The next extension example is on a 15-minute E-mini S&P contract (see Figure 4-4). We measured from the high made at 1435.75 to the low at 1429.25, looking for possible resistance on the way up. The S&P barely paused at the 1.272 extension, but did pause and show a minor decline at the 1.618 extension. Again none of this was too surprising, since the 15-minute chart was showing a healthy bullish pattern.

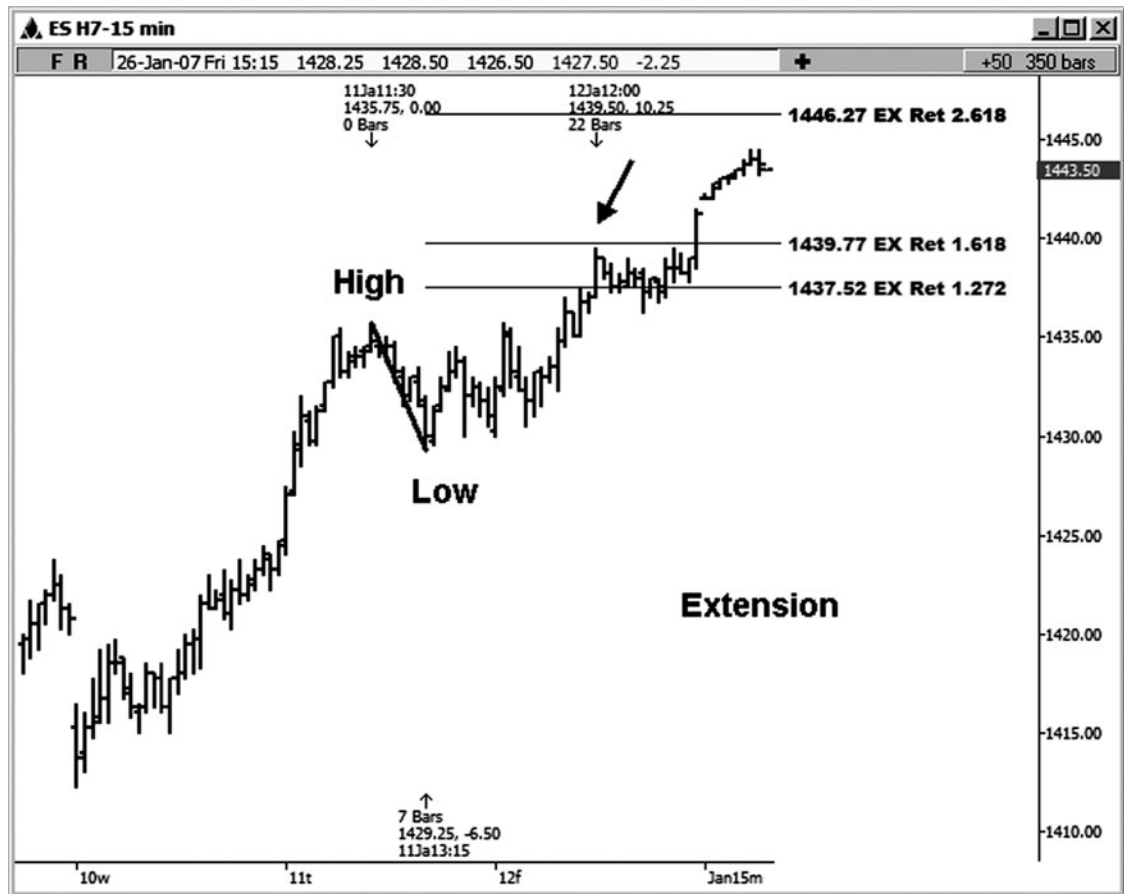


FIGURE 4-4

Figure 4-5 is another example of an extension that was run on a 15-minute chart of the E-mini S&P contract. We measured a prior low-to-high swing (from the 1/17/2007 low of 1435.50, made at 2:15 p.m. central time, to the 1/18/2007 high of 1440.75, made at 9:00 a.m. central time) and ran the 1.272 and 1.618 price extensions for potential support. The S&P contract did not even pause at the 1.272 extension; however, a tradable low was made at the 1.618 extension of the same swing.

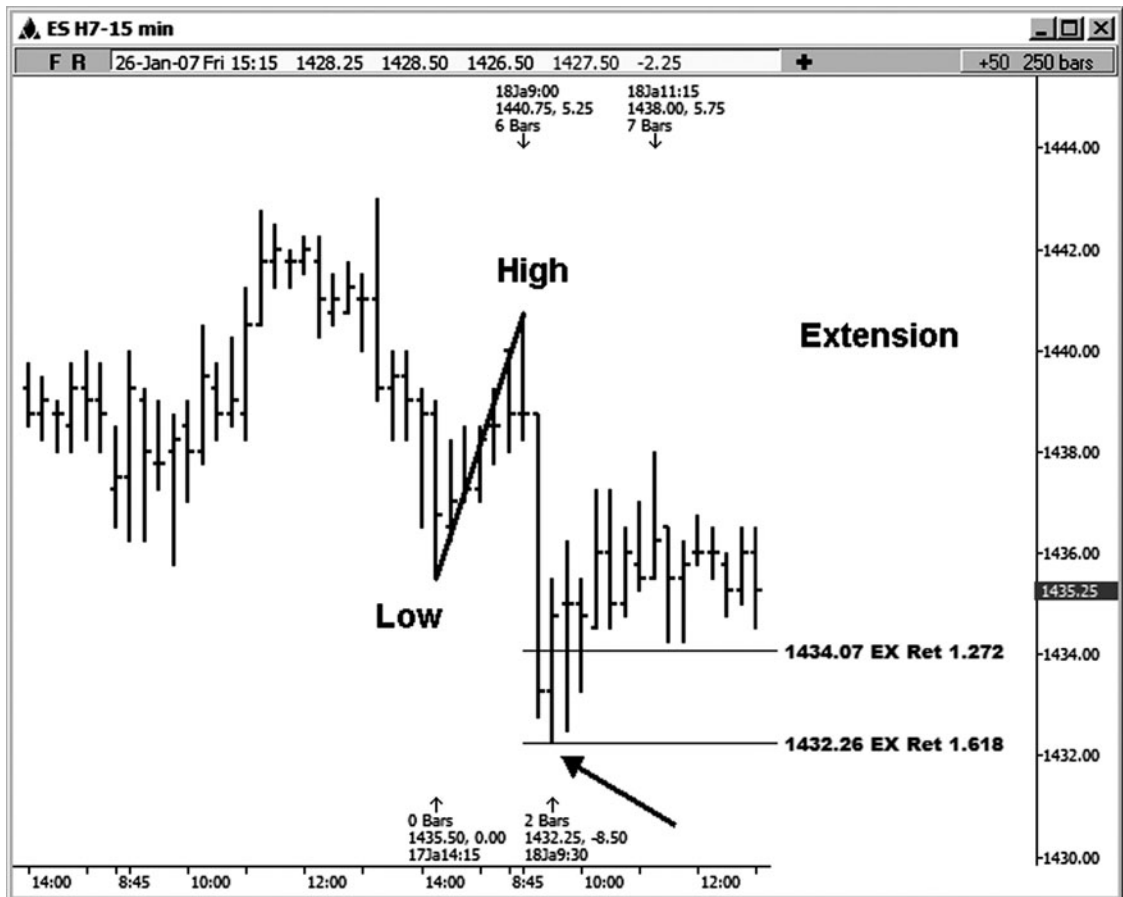


FIGURE 4-5

The next example of a price extension (see Figure 4-6) is made on the daily chart of the E-mini Russell contract. The 1.618 extension of the 12/05/06 high to the 1/9/07 low came in at 832.10 after the 1.272 extension was easily surpassed. One of the features on the Dynamic Trader software is that the program will automatically delete the price relationships that have been surpassed by a decent margin. In this case, this is why the 1.272 extension is not illustrated on the chart. The actual high was made at 831.90, just 2 ticks below this extension. A 58.70-point decline has followed this extension so far. I continually remind my traders to tighten up stops on their positions when we get near the 1.272 price extension of a prior swing or beyond it, since many moves terminate at least temporarily around extensions.

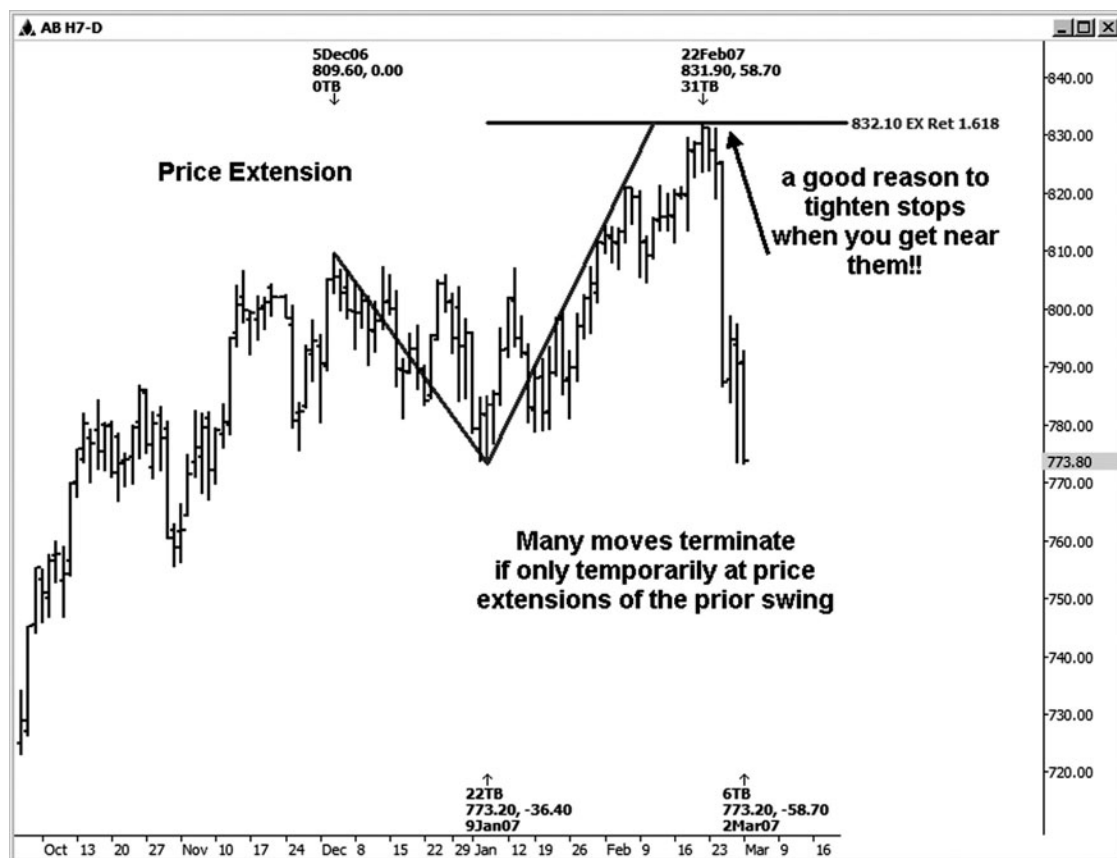


FIGURE 4-6

In Figure 4-7, we are looking at an extension on a daily chart of SBUX. Here, we measured from the 12/1/06 low made at 34.90 to the 12/5/06 high made at 37.14, looking for possible support. We did see a nice bounce around the 1.272 extension of this swing, although it was not a perfect hit. The low made on 1/26/07, however, was made within ticks of the 1.618 extension at 33.52. The actual low was made at 33.49.

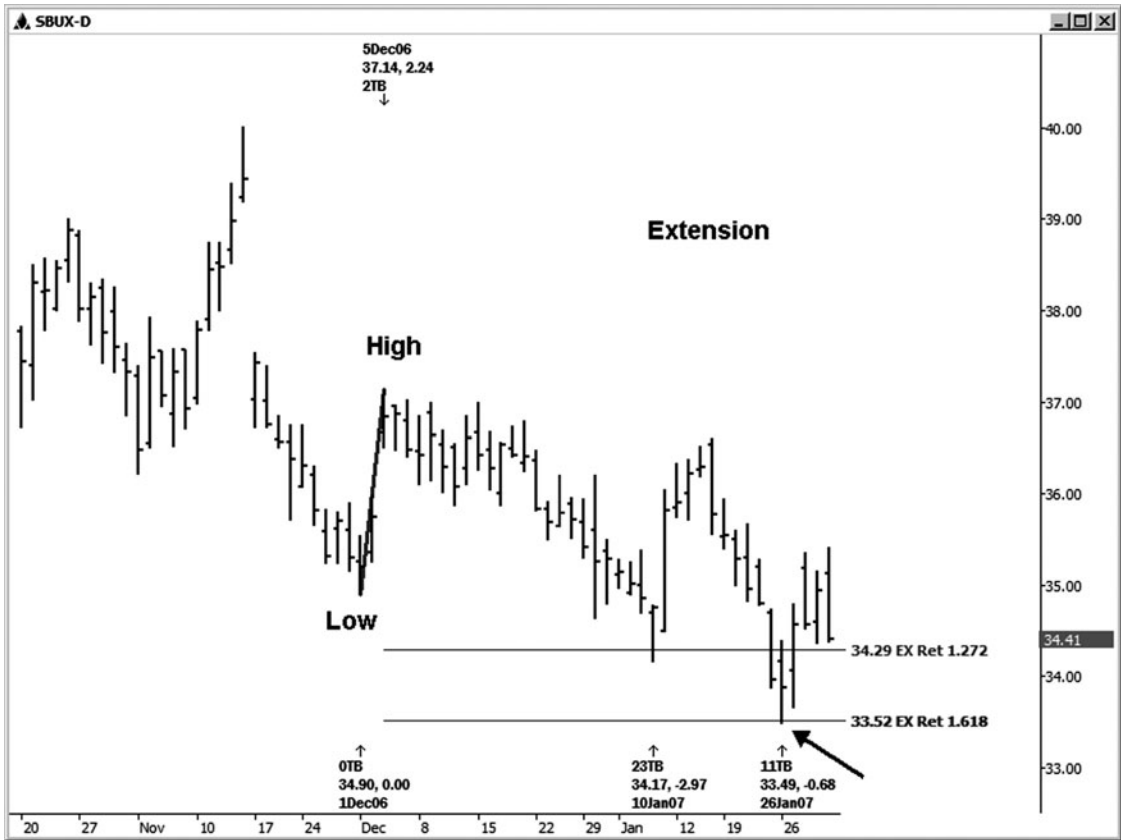


FIGURE 4-7

On the daily chart of IBM shown in Figure 4-8, we measured from the 11/29/05 high at 89.94 to the 7/18/06 low at 72.73, looking for possible resistance to the rally from the 7/18/06 low. In this case, the 1.618 extension provided such resistance. Again note that this was not a *perfect* hit: the extension came in at 100.58, and the actual high was made at 100.90. However, as long as a level is not taken out by a huge margin, I will typically leave it up on the chart and still watch for a possible reaction around it.



FIGURE 4-8

Google is a stock that seems to respect market geometry more often than not. In Figure 4-9, we measured from the 2/12/07 low made at 455.02 to the 2/22/07 high made at 484.24, looking for possible support at the price extensions. This stock barely stalled at the 1.272 extension, although we saw a tradable bounce after testing the area of the 1.618 extension.



FIGURE 4-9

In Figure 4-10, we ran the extensions on a daily chart of Intel, using the move from the 10/16/06 high at 22.03 to the 11/6/06 low at 20.32, looking for possible resistance. The 1.272 extension was hit and held exactly at the 22.50 level. A healthy decline followed this high.



FIGURE 4-10

On the daily chart of Home Depot in Figure 4-11, we ran the extensions of the move from the 11/1/06 high at 37.64 to the 11/14/06 low at 35.77, looking for possible resistance. In this case, the 1.618 extension produced a tradable high. This stock then resumed the uptrend after a healthy pullback from the 11/20/06 high. Keep in mind that many of these Fibonacci price relationships will *not* produce a change in trend and are violated every day. In later chapters I will show you examples where even a cluster of these price relationships fails to produce even a minor change in trend. This work is not magic, but if you learn how to use it properly, it *will* definitely provide you with a trading edge.



FIGURE 4-11

In the daily chart of Yahoo shown in Figure 4-12, we ran the extensions of the move from the 6/7/05 high at 38.95 to the 9/21/05 low at 31.60, which included multiple swings within this larger swing. We were looking for possible resistance at the 1.272 and 1.618 extensions on this chart. A tradable high was made just a few cents below the 1.618 extension at 43.49.



FIGURE 4-12



FIGURE 4-13

Fibonacci price relationships can be used on any time frame chart. Figure 4-13 is a three-minute chart of the E-mini S&P. Measuring from the 1398.50 low to the 1403.50 high, we would be looking for possible support at the extension of this swing. A tradable low was made off the 1.618 extension in this case.

Author Tip

In my chat room, I use the auto-typer feature to remind my traders constantly that many moves terminate at extensions, since I see this occur so often.

This daily cash S&P chart (see Figure 4-14) is yet another example of the market turning on a dime when either the 1.272 or the 1.618 extension has been met. Taking the move from the 3/5/07 low to the 3/9/07 high, the 1.272 extension of that swing came in at 1364.13. The actual low was made at 1363.98. A dramatic 74-point rally has followed this low so far.

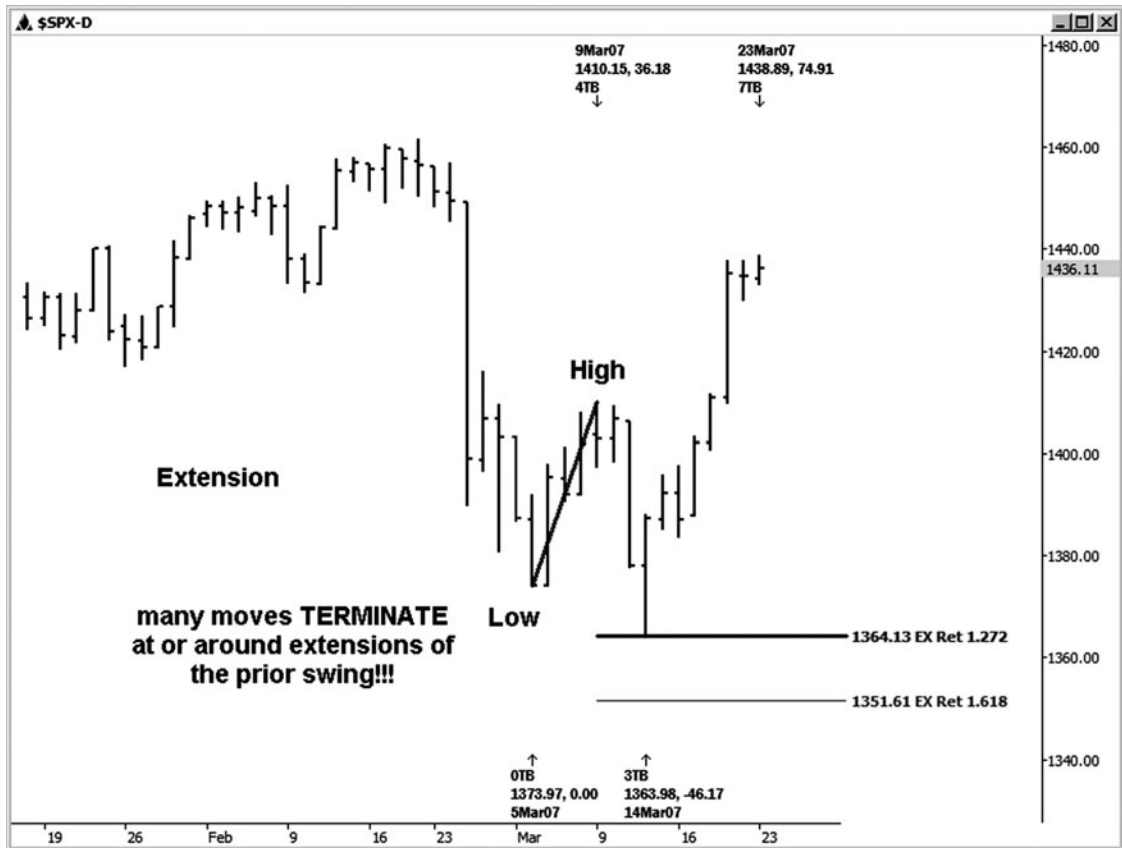




FIGURE 4-14



In this chapter, the chart examples have illustrated that many moves tend to terminate at the extensions of prior swings. These levels are well worth knowing as a trader. When you project them in advance, you have the advantage of knowing that the odds that the market move will terminate are higher than usual. Now it's time to look at Fibonacci price projections in our next chapter.



5

C H A P T E R

FIBONACCI PRICE PROJECTIONS OR OBJECTIVES

Last but not least, in this chapter I will show you how to apply Fibonacci price *projections* to the chart we are analyzing. These projections are sometimes also called price *objectives*. I tend to indicate them on my charts by the letters PO for price objectives rather than projections.

These price projections are run from three data points and are comparing swings in the same direction. They are run from a prior low-to-high swing and then projected from another low for possible resistance, *or* they are run from a prior high-to-low swing and projected from another high for possible support. Here we use 1.00 and 1.618 ratios to run the projections.

The 100 percent projection is also where we find *symmetry*. (This concept will be discussed at length in the chapter on symmetry trade setups.) What you need to know at this point is that symmetry is defined as similarity or equality of swings in the same direction. I use symmetry projections every day for setting up trades in the direction of the trend. This concept will become crystal clear as we walk through the chart examples.

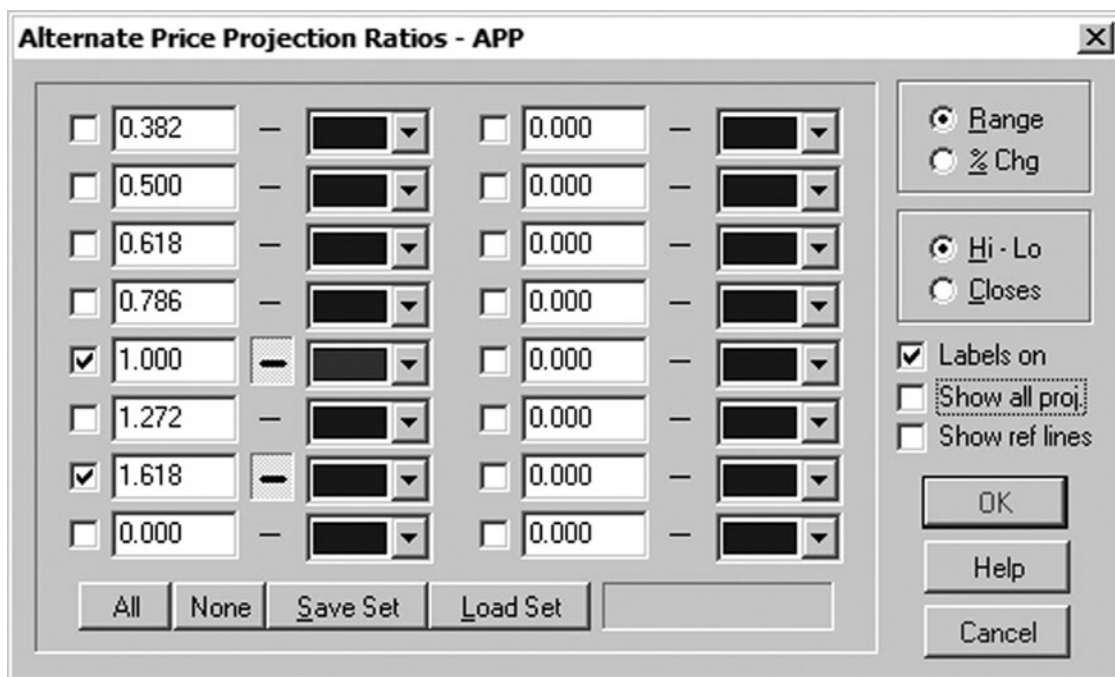


FIGURE 5-1

Price Projection Tool on Dynamic Trader

To run these price relationships, you have to use an analysis tool that allows the use of three points on the chart. In the Dynamic Trader software, it is called the *alternate price projection tool*. The setup of this tool is illustrated in Figure 5-1.

There can be some confusion when I teach how to run the price projection relationships, since many technical analysis programs call the Fibonacci tool using three points an *extension* tool rather than a projection tool. Just remember that to run your projections to compare swings in the same direction, you need to use the tool that allows you to choose three points, regardless of what it is called.

Note: What I call price projections or objectives in my work will be labeled in the following Dynamic Trader chart examples as APPs or Alternate Price Projections.

Our first projection example is Figure 5-2, a daily stock chart of General Motors. Remember that with the projection tool that uses three points, we are comparing swings in the same direction. Here we measured the swing from A to B, which was a 3.90 swing. We then projected both the 1.0 and 1.618 projections of the first swing from point C, looking for potential resistance. The 1.0 projection came in at 34.28. There was no reaction at this first projection. The 1.618 projection came in at 36.69. Notice that the rally in GM terminated just below this second resistance projection—at least temporarily.



FIGURE 5-2

Our second projection example is on a three-minute chart of the E-mini S&P contract. In Figure 5-3, we are using only the 1.0 projection, since we are comparing *corrective rallies* within a downtrend. I like to compare corrective swings because more often than not, you will find similarity or equality in these swings. This becomes a powerful tool to aid in our entries in the direction of the trend.

Notice that the first swing illustrated on this chart was 2.50 E-mini S&P points from the 1434.25 swing low to the 1436.75 swing high. We then took 100 percent of this swing and projected it from the low made at 1433.75, which gave us the 1436.25 level for the projection and possible resistance.

The actual high was made exactly at the 100 percent projection. A decline of more than 4.00 points was seen from this *symmetry projection*. In this case there was perfect symmetry (equality), as both swings were exactly 2.50 points.

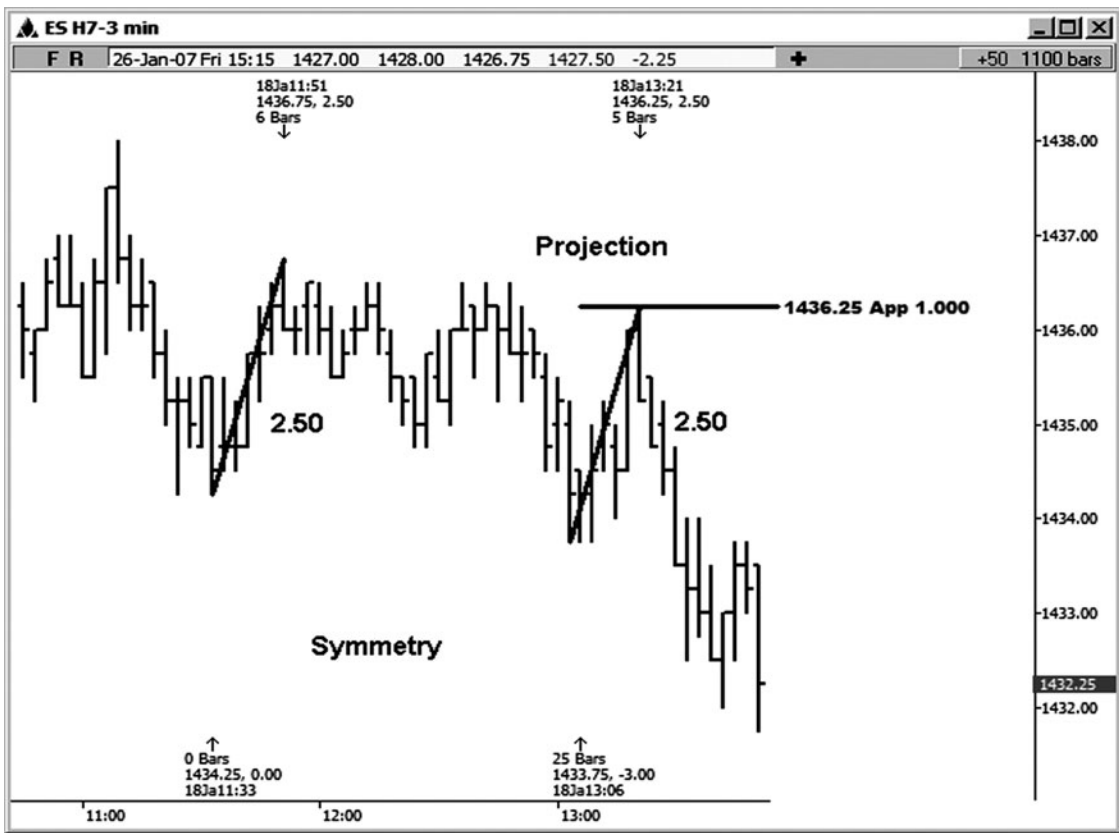


FIGURE 5-3

Let's look at another price projection example in Google stock. In Figure 5-4, we measured the swing from point A to point B and then ran our projections of 1.0 and 1.618 from point C, looking for possible resistance. The 1.0 projection came in at 389.32. Though it was not a perfect hit in price (the actual high was made at 390.00), it definitely ended up producing a nice downside reversal. The 1.618 projection at 402.50 didn't provide any resistance at all in this case.

There will be days when some of these Fibonacci price relationships will hit exactly at the level projected, and it will seem very magical. Don't expect to always see perfection with this work, however. As long as a level

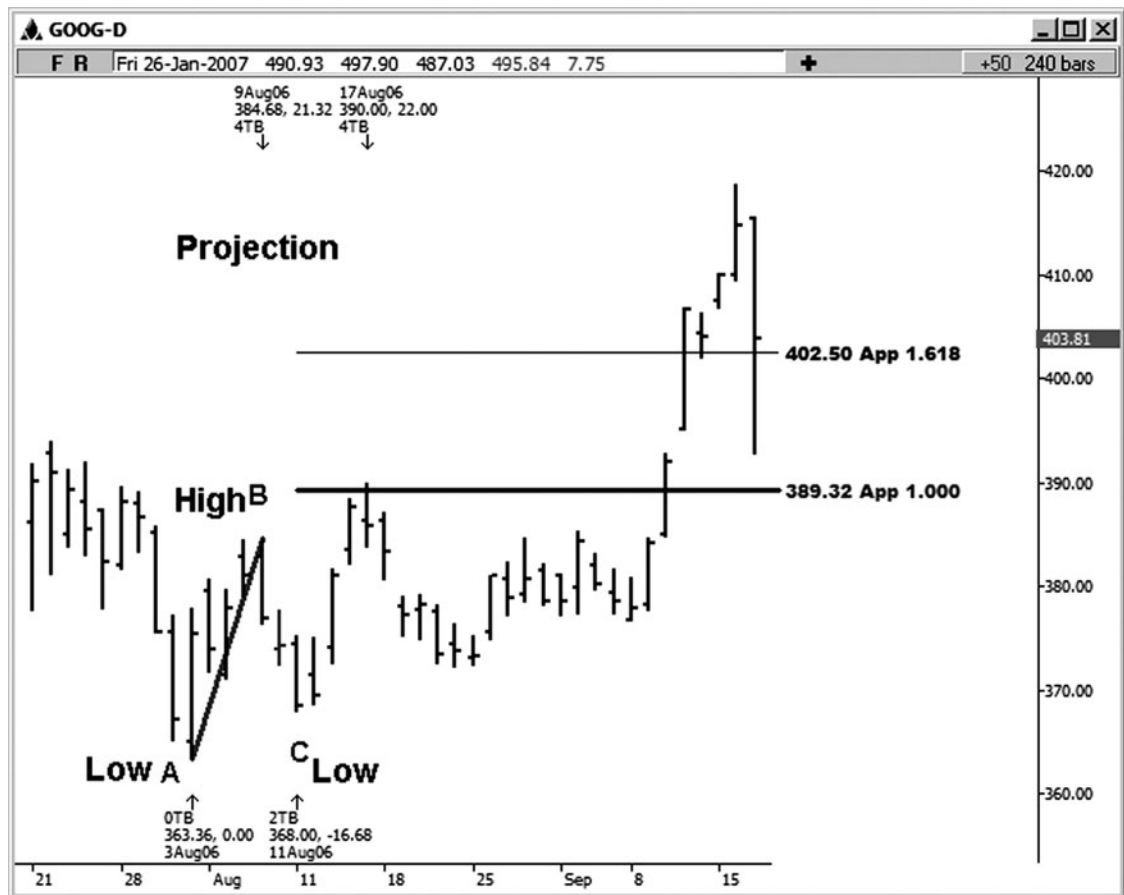


FIGURE 5-4

is not violated by a huge margin or does not fall short of a level by a huge margin, it still has value as a price decision. Personally, I have been found guilty of erasing Fibonacci levels too quickly. My chat room traders are the first ones to call this to my attention.

Figure 5-5 is a daily chart of Intel stock. Here we measured the swing from point A to point B, which was a 2.55 decline. We then projected 1.0 of this decline from point C, for a projection of possible support at 19.95. The actual low in this case was made at 20.03, which was just a bit short of the support level. There was definitely some similarity (symmetry) between these swings, as the first swing was a decline of 2.55 and the second was a decline of 2.47.

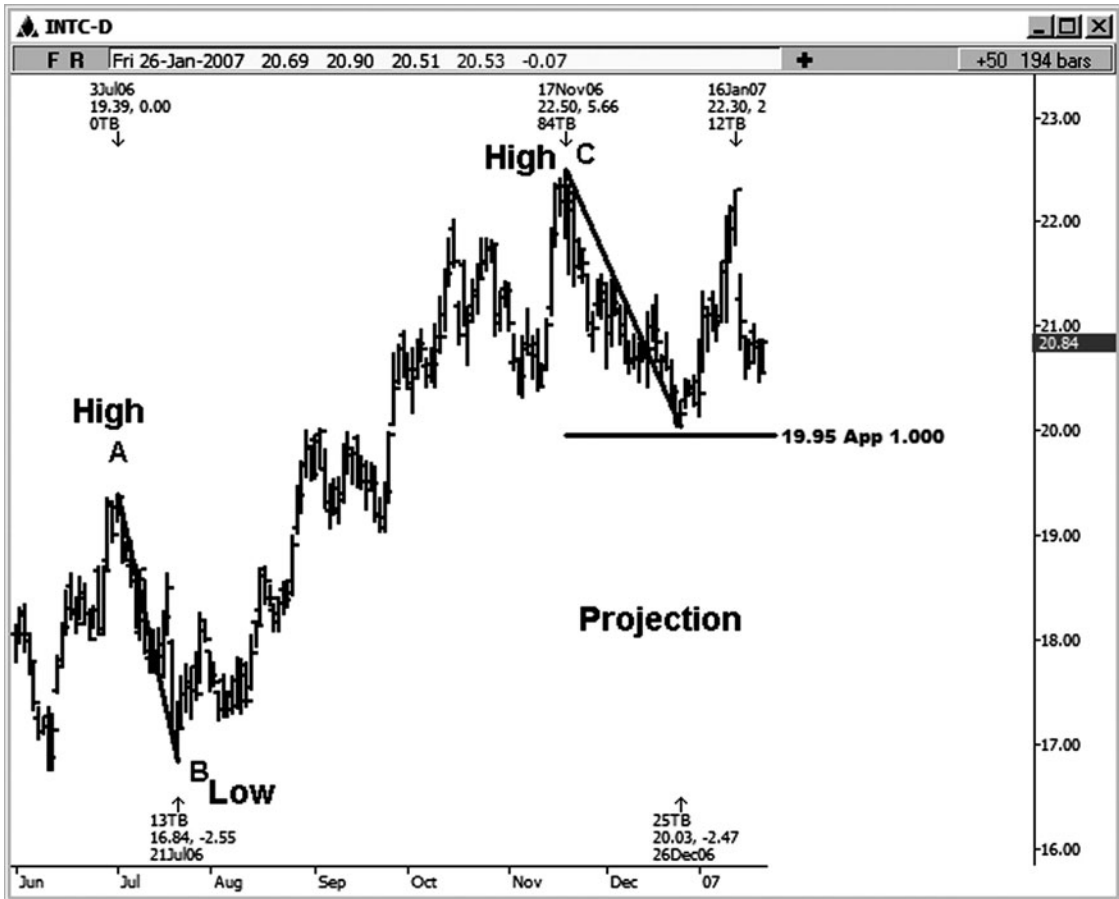


FIGURE 5-5

Let's look at another example of a price projection in the mini-sized Dow. On this 15-minute chart (Figure 5-6), we started with a rally from point A to point B that was 32 points. We then multiplied the range of this first swing by 1.0 and 1.618 (actually, the computer program did) and projected the results from point C. In this case, all we saw was a short-term stall around the 1.0 projection. Beyond that, the projections really didn't provide much resistance to the rally. (Remember that many of these price relationships will be violated and won't have any predictive value at all!)

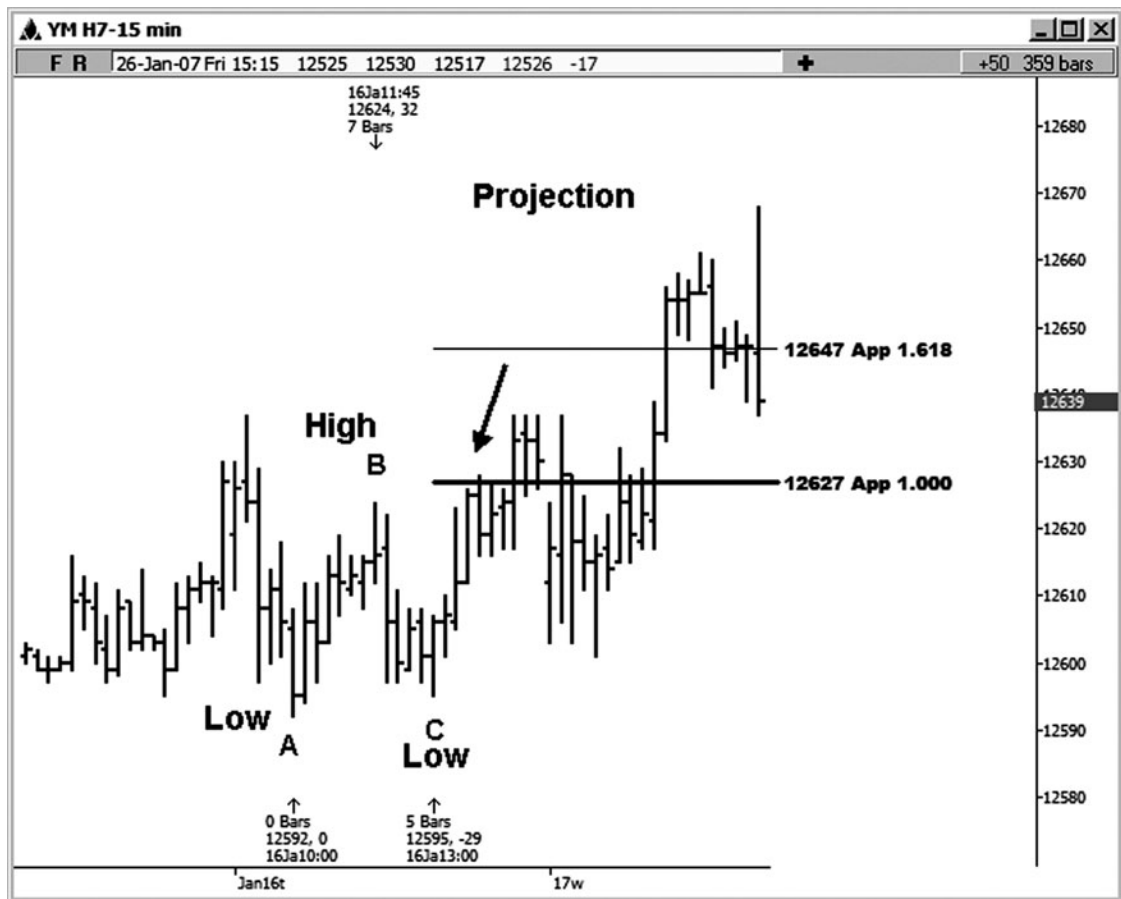


FIGURE 5-6

Again, I don't want to give you the idea that Fibonacci price relationships always hold, so I'd like to share an example in Google where the price projections did not produce any change at all (see Figure 5-7). It would be irresponsible of me as an author to show you *only* examples where the levels have held. Besides the fact that there is no methodology or analysis in existence that will work 100 percent of the time, as a trader you would know *not* to enter a trade against these price zones if you do not see any reversal indications or entry triggers as they are tested.

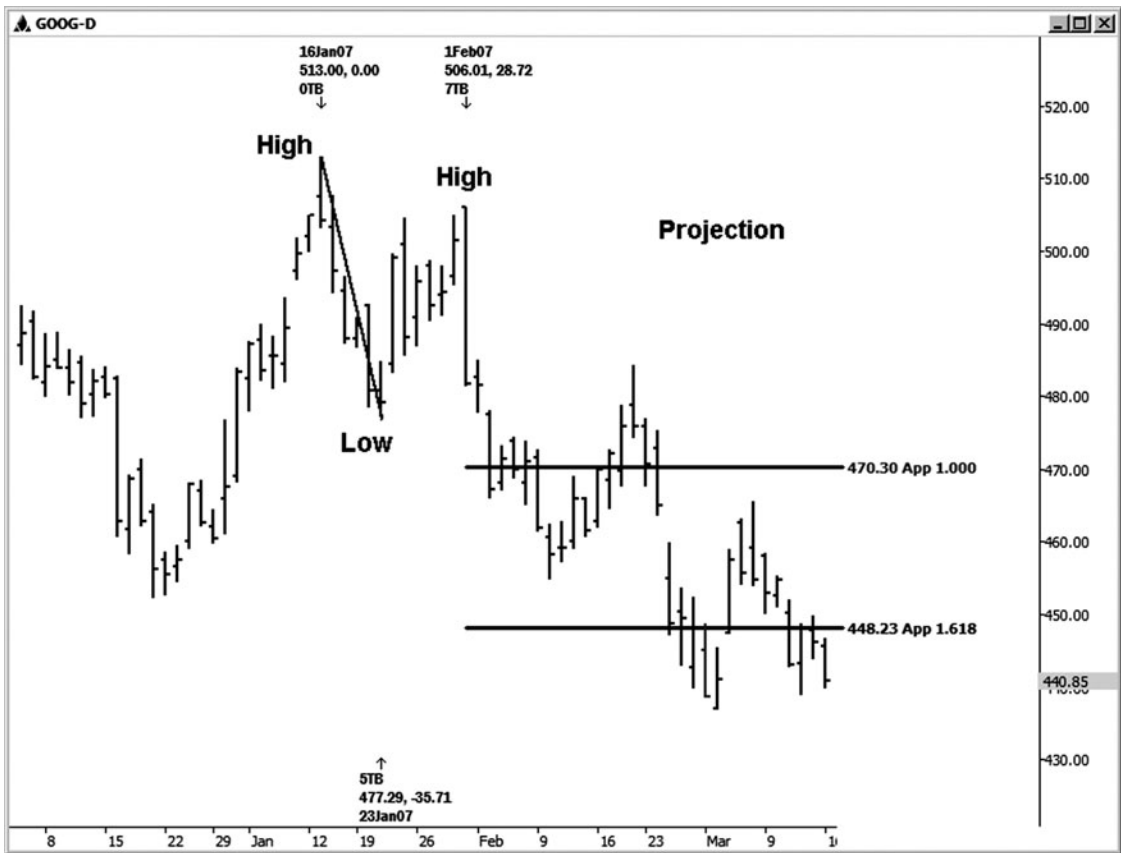


FIGURE 5-7

Figure 5-8 is an example of a price projection on a daily cash chart of the Russell index. We measured from the 2/14/06 low (point A) to the 3/3/06 high (point B) and ran the projections from the 3/8/06 low (point C) for possible resistance. Notice the minor reaction at the area of the 1.0 projection and then the healthier decline just a touch below the 1.618 projection of this same swing.



FIGURE 5-8

In the S&P cash daily chart (see Figure 5-9), we measured from the 8/13/04 low at 1060.72 (point A) to the 10/6/04 high at 1142.05 (point B) and then projected the ratios from the 10/25/04 low at 1090.19 (point C), looking for possible resistance. In this example, we saw a minor stall at the 1.0 projection of this swing from A to B. In addition, we saw a much healthier downside reversal a bit below the 1.618 projection.

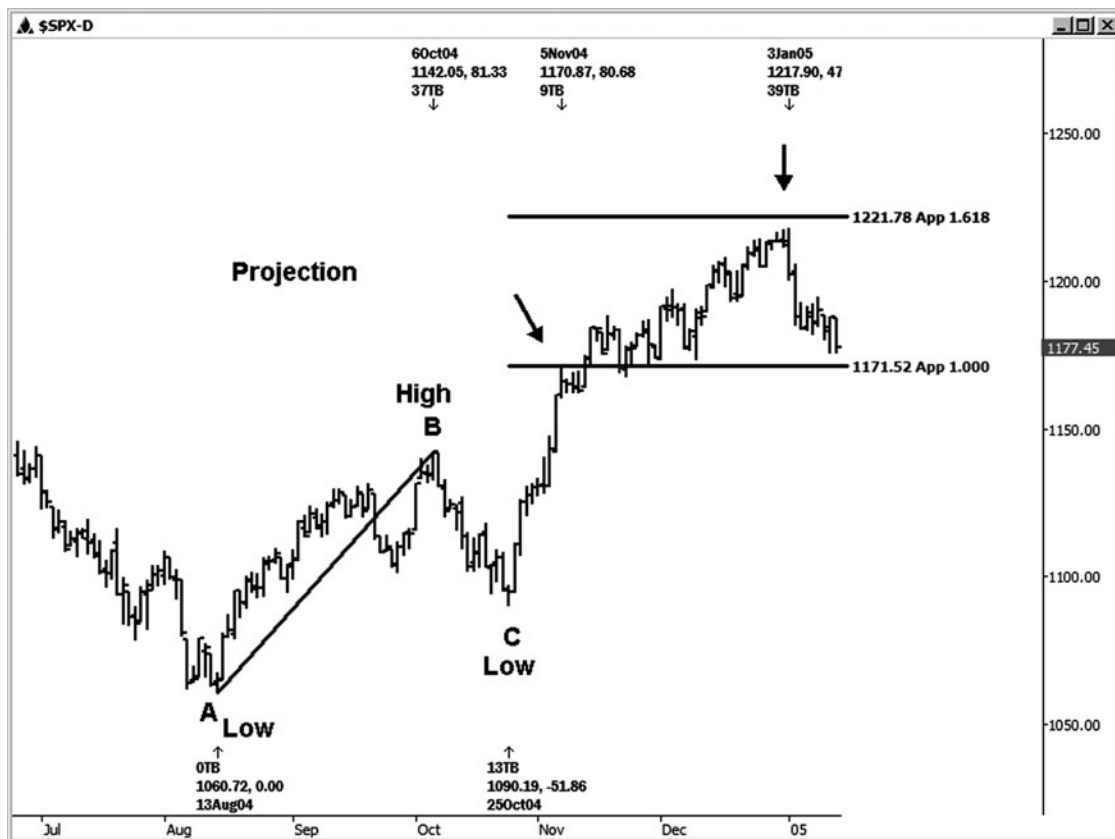


FIGURE 5-9

In the next example, in the daily cash S&P chart, Figure 5-10, we measured from the 1/8/07 low at 1403.97 (point A) to the 1/25/07 high at 1440.69 (point B) and then projected the ratios from the 1/26/07 low at 1416.96 (point C), looking for possible resistance. A tradable high was seen just a touch below the 1.0 projection. (We did not test the 1.618 in this case.)

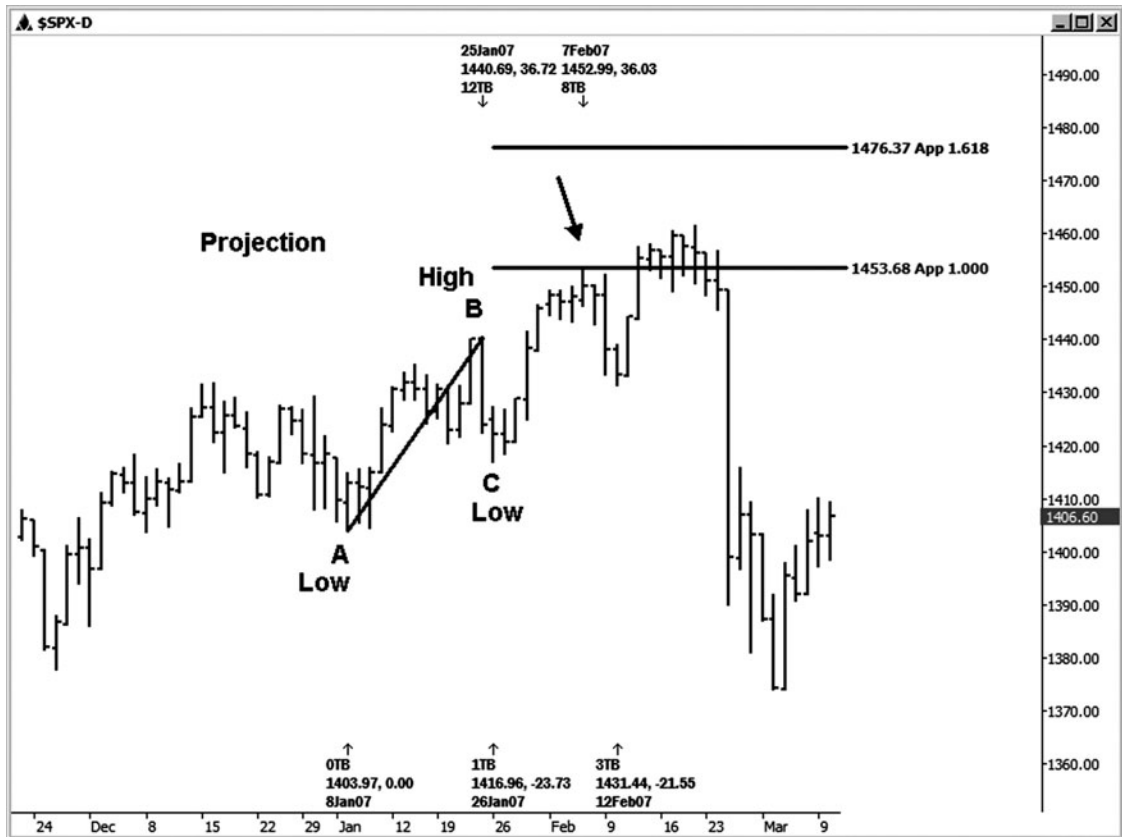


FIGURE 5-10

Our next example is in the FOREX market—the Canadian dollar (see Figure 5-11). Since we are looking at a healthy uptrend in this case, we wanted to use the projection tool to look for possible symmetry support within the uptrend. When we took the move from the high made on 12/18/06 to the low made on 12/20/06 and then projected from the new high made on 1/11/07, the 1.0 projection from the 1/11/07 high showed us possible support at the 1.1644 area. The actual low was made at 1.1646, which was a couple of pips short of the projection. This low was followed by a beautiful rally to 1.1851, which was a 205-pip rally from the 1/16/07 low. Notice that this rally made it up to the 1.272 extension and then stalled.

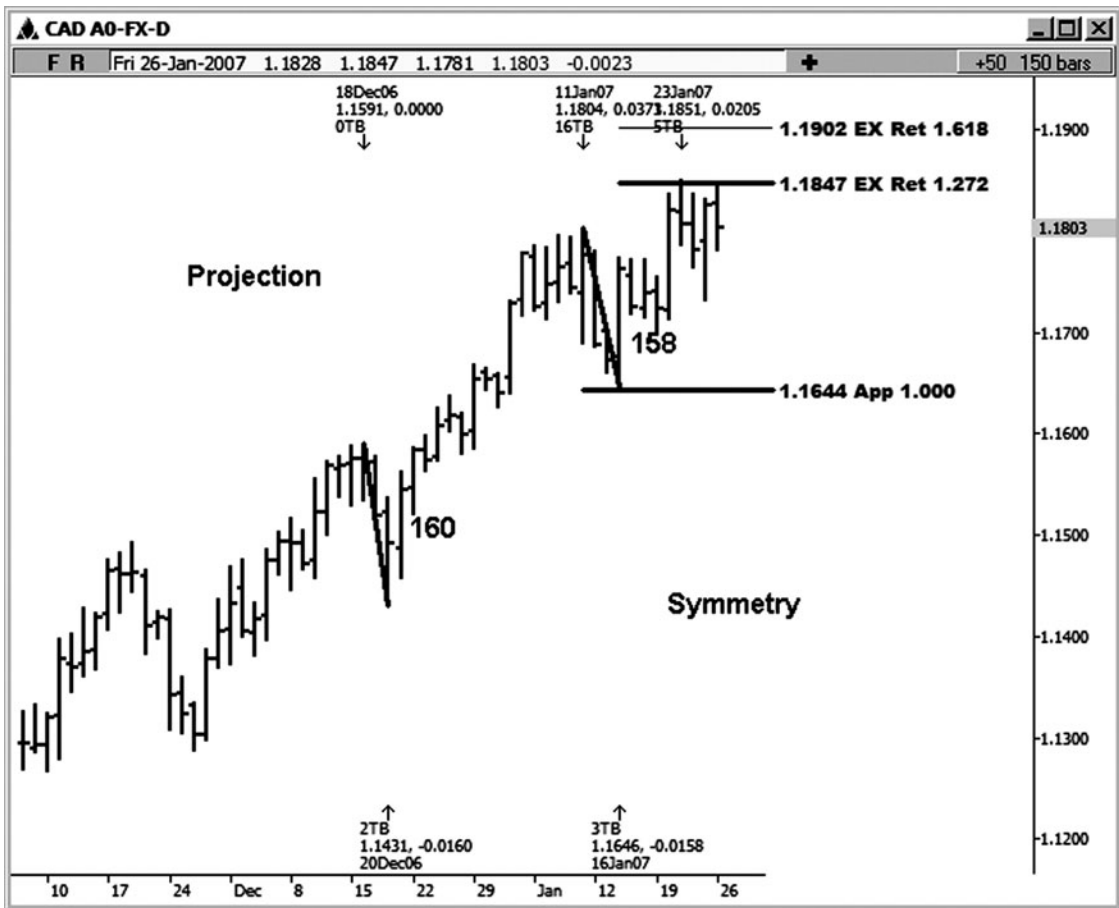


FIGURE 5-11

Next, let's take a look at JC Penney stock on a daily chart (Figure 5-12). Here, we measured the range from the 11/13/06 high to the 12/1/06 low (points A and B) and projected from the 12/15/06 high (point C) for possible support. In this case, the 1.0 projection of that prior swing pretty much caught the low before a rally of 11.95. (The 1.618 projection was not tested.)



FIGURE 5-12

On the next daily stock chart of YHOO, it may be a bit difficult to see an obvious place to run a projection (see Figure 5-13). The swing low at point C is not as well defined as some of the other examples you've seen so far. Running Fibonacci price relationships on a chart is sometimes more of an art than a science. There will be times when you just have to use some common sense and/or intuition while doing your analysis. Even though the swings in this example may not be obvious on a daily chart, if you took this down to a 60-minute chart, they would be more obvious. You can always go down to a lower time frame chart and make an assessment if you are wondering whether or not to use a certain high or low in your calculations.

We measured the swing from the 10/25/05 low to the 11/1/05 high (points A and B) and then ran the projections from the 11/3/05 low (point C), looking for possible resistance. We did not see any reaction at the 1.0 projection of the prior swing, although we did see a tradable high develop right around the 1.618 projection of this same prior swing.

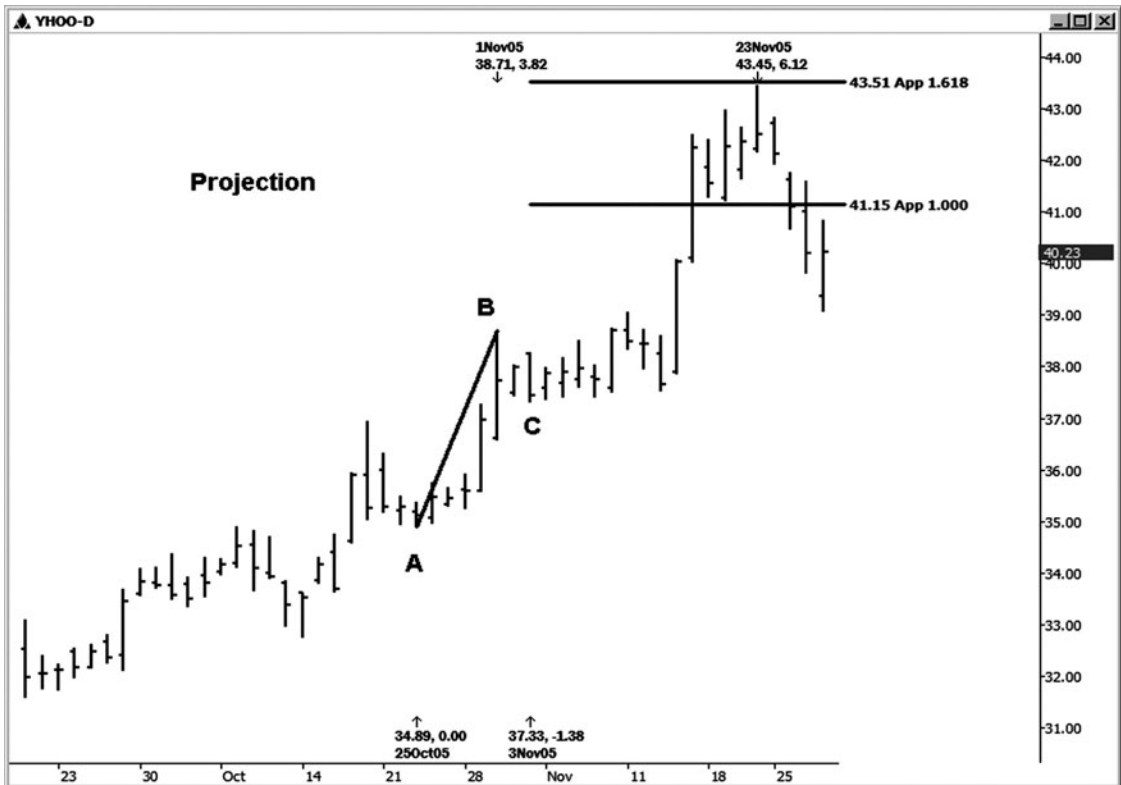



FIGURE 5-13


Figure 5-14 shows the daily GM chart where we measured from the 6/8/06 low to the 6/30/06 high (points A and B) and then ran the projections from the 7/14/06 low (point C), looking for possible resistance. On this chart, we saw a nice reaction off the 1.0 projection of that prior swing. (While the reaction just below the 1.618 projection was not really close enough for this perfectionist to call it a hit, it is still a good habit to trail stops up closer to the current market activity any time you are moving close to an important price decision. Strategies using trailing stop-loss orders will be discussed later in this book.)



FIGURE 5-14



The last several chapters showed examples of how you can run the three different types of Fibonacci price relationships that we will use to create our trade setups: price retracements, price extensions, and price projections. The next chapter will look at the “price clustering effect,” or “confluence,” of these price relationships, which will identify our first type of trade setup: a Fibonacci price cluster.



6

C H A P T E R

FIBONACCI PRICE CLUSTER SETUPS: TRADE SETUP 1

My definition of a price cluster is the coincidence of at least three Fibonacci price relationships that come together within a relatively tight range. These price clusters identify key support and resistance zones that can be considered to be trade setups. A price cluster can be created from three retracements, three extensions, three projections, or the combination of any of these price relationships.

A price cluster can also develop with a coincidence of more than three price relationships. Three is just the minimum number required to meet the definition. You may see five to ten price relationships come together in a relatively tight range. When you do see more of these price relationships come together, this doesn't mean that the zone is more likely to hold, but it does tell you that it is a very important price decision zone. If the zone holds, you are likely to see a nice move off of it a high percentage of the time. If the same key zone is violated, don't be surprised if you start to see an acceleration of the original trend going into the zone. There are times when I see these large clusters develop not too far from current market activity, and they tend to act like a magnet for price.

TRENDS

When I'm setting up price clusters in the market, as far as trade *entries* are concerned, I want to focus on the clusters that set up in the direction of the trend on the chart we are analyzing. These will be the higher-probability setups. The simple definition of a trend that I use is one that involves looking at the pattern on the chart. Are we looking at an *uptrend*, with a general pattern of higher highs and higher lows, or are we looking at a *downtrend*, with a general pattern of lower lows and lower highs?

I believe in going with the flow rather than attempting to swim upstream, as many traders do with countertrend trades. If I'm looking at a bullish chart pattern (higher highs and higher lows), I set up my clusters for possible entries on the buy side, in keeping with the trend. If I'm looking at a bearish chart pattern (lower lows and lower highs), I look at the clusters for entries on the sell side to help me enter in the direction of the downtrend. I look for the clusters that show up "counter" to the trend in order to help manage profits and exit strategies. For example, if we are long and we are seeing a resistance cluster within an uptrend, I will suggest that my traders tighten up stops and/or take partial profits.

A price cluster that is counter to the immediate trend is still considered a trade setup, although you need to be aware that the odds that one of these clusters will turn into a winning trade are *lower* than those on the clusters that are not fighting the trend. Using proper trade filters and triggers when these countertrend setups develop will improve your odds in this case.

Diagram of Uptrend/General Pattern of Higher Highs and Lows—Focus on Setting Up Buy Clusters

Figure 6-1 is a daily cash S&P chart. The general pattern of this market is up from the July 2006 low to the February 2007 high. What I mean by *general* is that the chart mostly shows a pattern of higher highs and higher lows. However, there are places on this chart where you have taken out a prior swing low, even though the overall direction of the market is still trending upward. Another way to look at this is through the eyes of a four-year-old. Have a four-year-old look at a chart for you, then ask the child if prices are going higher or lower. The child will typically step back, observe, and give you the correct answer by observing the forest and not the trees.

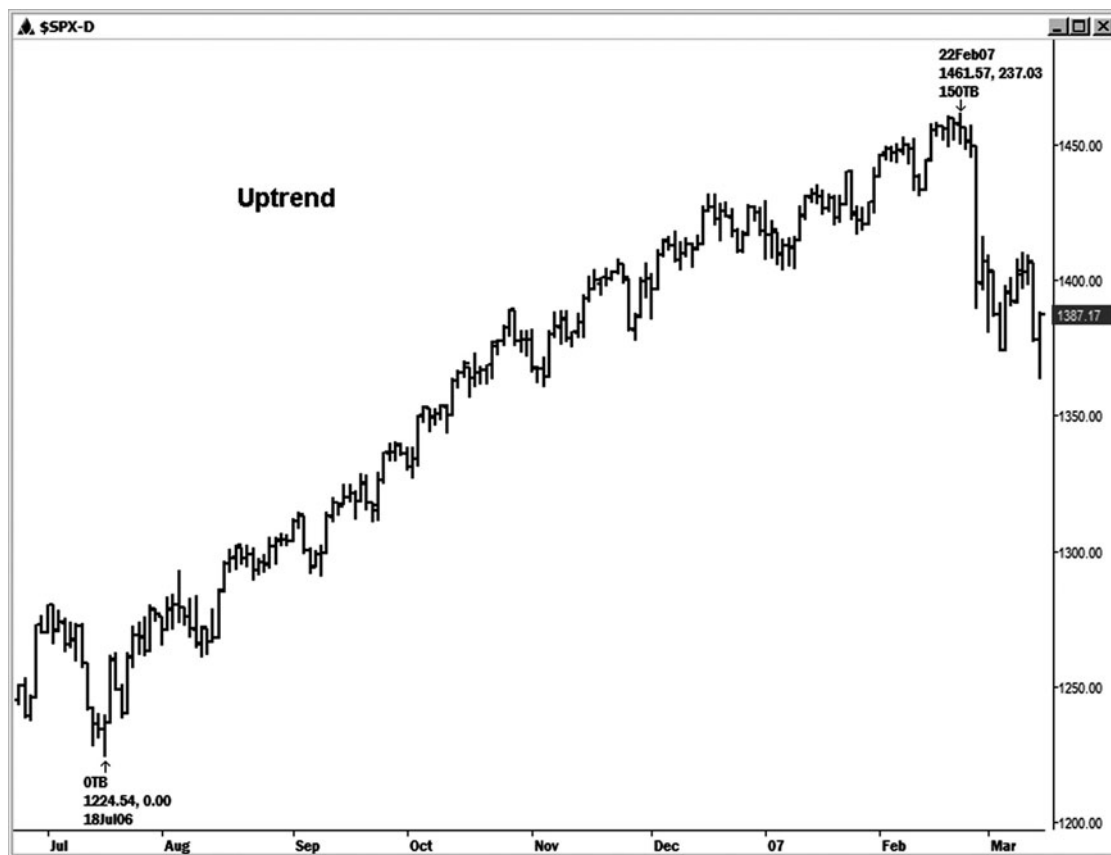
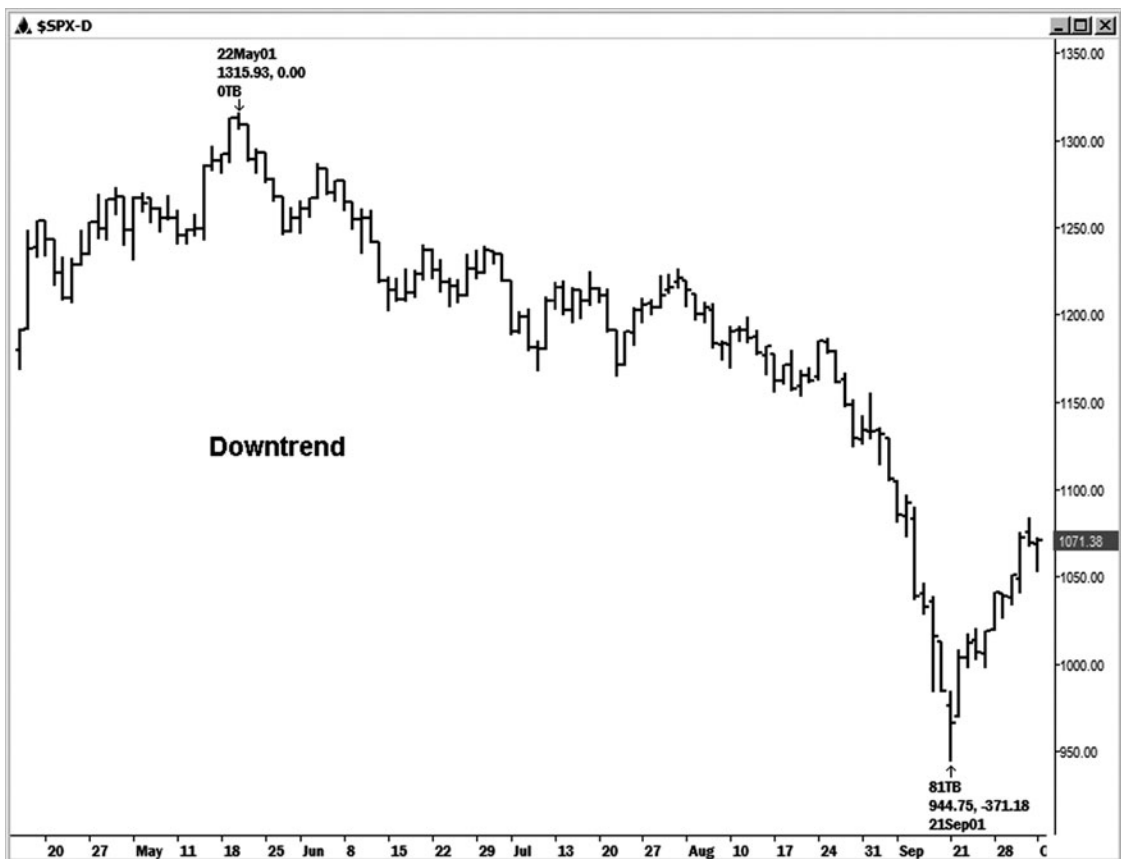


FIGURE 6-1

Diagram of Downtrend/General Pattern of Lower Lows and Highs—Focus on Setting Up Sell Clusters

Figure 6-2 is a daily cash S&P chart. The general pattern of this market is down from the May 2001 high to the September 2001 low. What I mean by *general* is that the chart mostly shows a pattern of lower lows and lower highs. However, there are places on this chart where you have taken out a prior swing high, even though the overall direction of the market was still trending downward. Remember to look at the chart with the mind of a four-year-old!

**FIGURE 6-2**

MONEY MANAGEMENT

Before I get into the examples of the actual cluster setups, let's go over how you should generally be thinking of using them to profit in the market. First, let's look at defining your risk. When you enter a market using a price cluster setup, the *maximum risk* is defined as a few ticks above or below the *extreme* of the price cluster zone. There are a couple of other ways you can place stop-loss orders with a lot less risk than the maximum. (Additional strategies will be discussed later.)

Next, you should have a general idea of what the profit potential for the trade is. My minimum trade target for any price cluster setup is always the 1.272 extension of the swing into the cluster zone. This target is met a high percentage of the time, especially in a nicely trending market, but keep in mind that it is not *always* met. My second target from this same swing is always 1.618, and then my third target is 2.618.

There are a few things that I need to point out about trade targets. Since the target for a setup is not *always* met, make sure you use good money management. This means either moving a stop to breakeven or trailing one as the trade moves in your favor. This way if you don't attain the 1.272 target, you are protecting yourself from a loss. Also note that the 1.272 target is often surpassed. This is a reason for keeping at least a partial position beyond your first target. Instead, you can use a trailing stop on the balance of your position and let the market take you out when the move loses momentum, rather than trying to determine in advance how far the market will go and how much it wants to give you on a trade.

PRICE CLUSTER EXAMPLES

Now let's go through some price cluster setup examples. To help you follow along with these examples, I will reference either the dates or the prices of the prior highs and lows I am using to run the price relationships.

In the first example of a price cluster setup, I will walk you through each step, starting with looking at a blank chart and deciding which side of the market to set it up on. In the later examples, I will still illustrate where the price cluster relationships are being projected from, but with fewer charts than in the first example.

Let's look at a blank E-mini Dow chart to decide which side of the market we want to set up. Here we are looking at a 30-minute chart of the June 2007 contract (see Figure 6-3). To me, the pattern is clearly defined as bullish by the general pattern of higher highs and higher lows. Since I want to focus on setting up my clusters in the direction of the trend of the chart I am analyzing, I want to set up all possible price support relationships in this case. Then I will look for a confluence or clustering of price relationships that will define my trade setup.

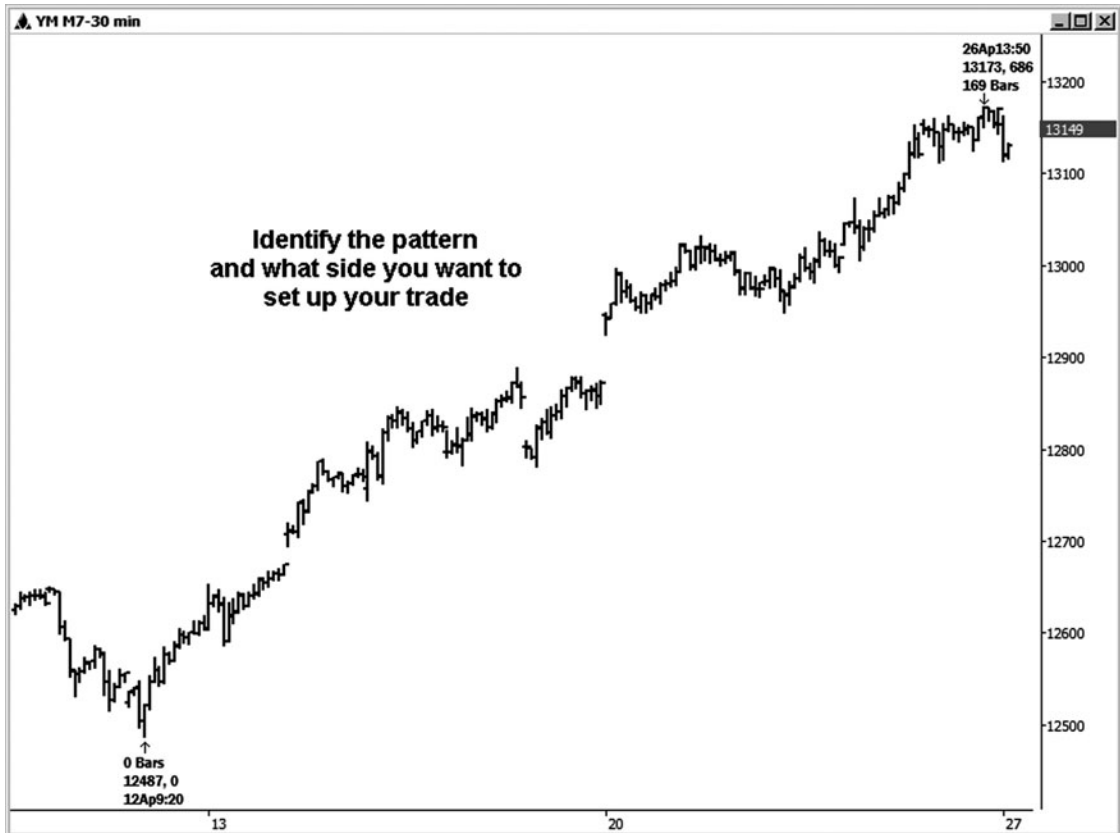


FIGURE 6-3

There were two obvious swings on which to run the Fibonacci price retracements: the 12781 low to the 13173 high and the 12948 low to the 13173 high (see Figure 6-4). You can see where some of these possible support levels came in. (Don't worry if you don't understand why I chose those swings just yet. By the time you go through all the examples in this book, you should have a better idea of how to choose the swings for this analysis.)

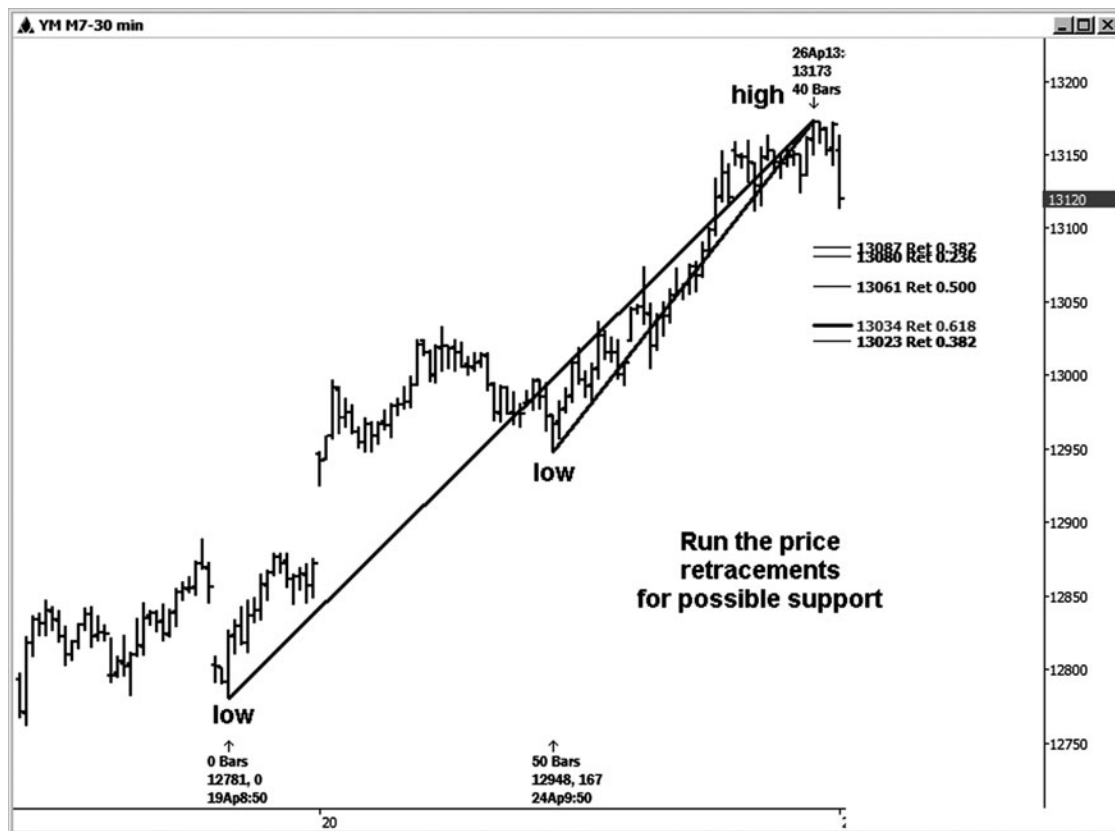


FIGURE 6-4

Once I run the retracements, I look and see whether running any price extensions of the prior swings for possible support makes any sense. In this example, I ran the extensions from the 13112 low to the 13173 high and also the extensions from the 13124 low to the 13173 high. The 1.272 and 1.618 extensions of those swings are illustrated in Figure 6-5.

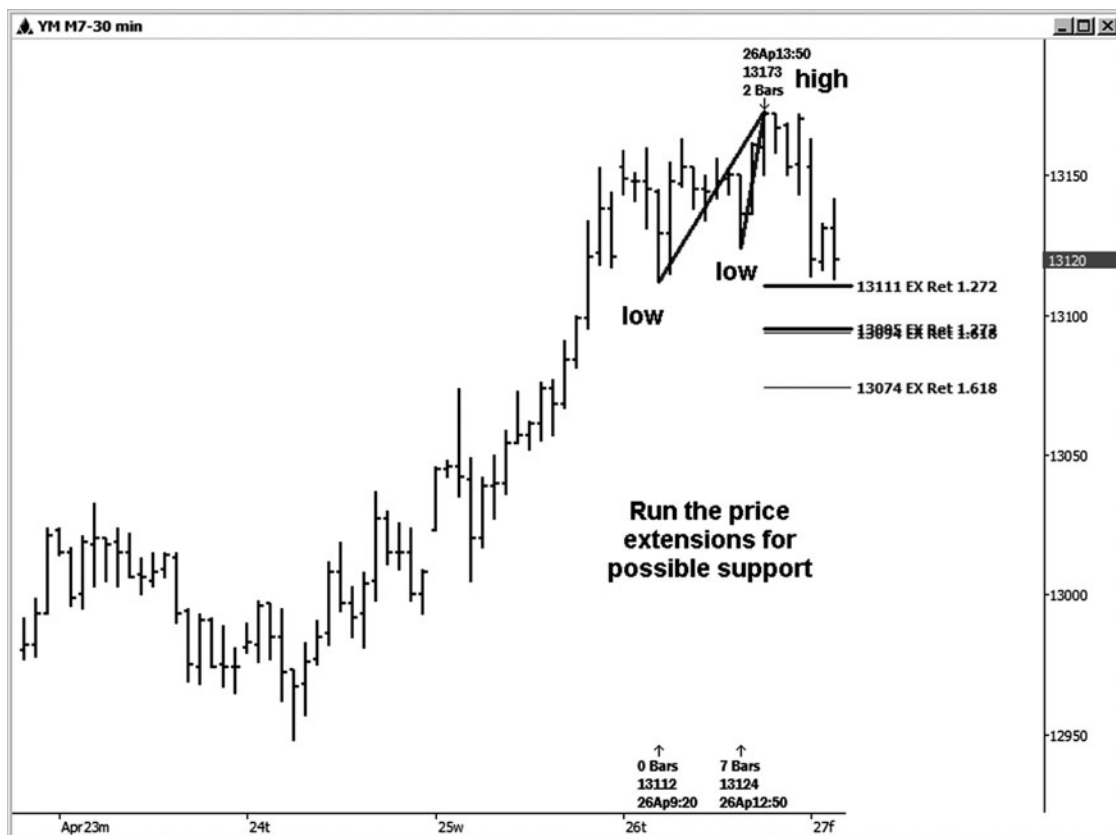


FIGURE 6-5

Last but not least, I need to determine what projections I can run for possible support. In this case, I see that I want to run only the symmetry or 1.0 projections of the prior declines in this bullish swing, since the 4/12/07 low was made at 12487. I'm running only these 1.0 projections rather than the 1.618 ratio as well, since I only want to compare the prior corrective declines with any new decline. In Figure 6-6, I have labeled the prior declines that I am going to measure and project from the 13173 high. The results of these projections are illustrated on the chart.

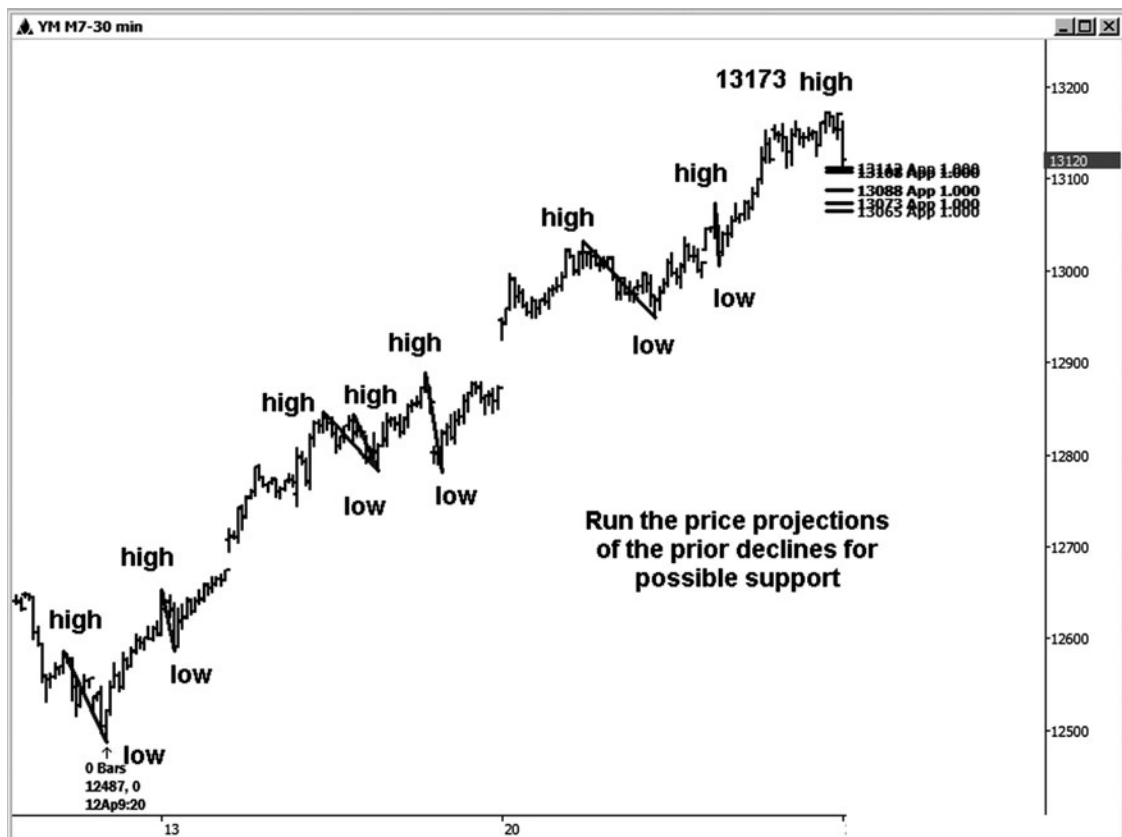


FIGURE 6-6

Author Tip

The process of running these Fibonacci price relationships does *not* have to be done in a specific order. You can run the projections or the extensions first if you like. What is more important is that you run them all and then look for the clustering effect.

Figure 6-7 illustrates all the price relationships in this Dow example coming together. Let's focus on the first two areas on this chart that are clustering nicely. First, we have a key price cluster decision/trade setup at the 13107–13112 area. Second, we have a key price cluster decision/trade setup at the 13087–13095 area. I will start to get interested in the other zones only if we start violating these first key decisions.

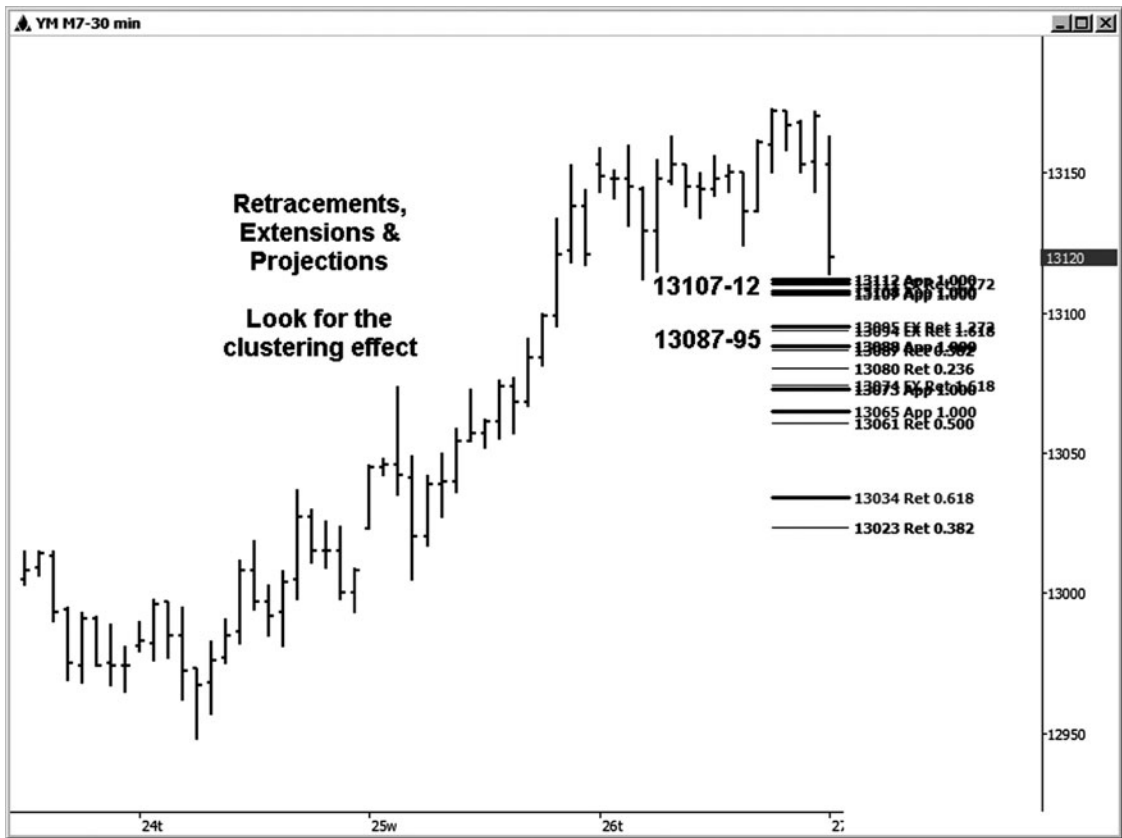


FIGURE 6-7

Figure 6-8 illustrates the results of the analysis. This trade was actually set up in my chat room on 4/27/07. A low was made at 13113, which was just a tick above the high end of the first price cluster zone. A 75-point rally from this price cluster low was eventually seen. The dollar value of this run was \$375.00 per contract, although a trader would expect to catch only some of the move in the middle between the cluster low and where the rally terminated.



FIGURE 6-8

Since the high end of the cluster zone is what held, I am going to show you the exact price relationships that came together between 13107 and 13112, starting with the price projections that are illustrated in Figure 6-9.

- 1.0 projection from the 12653 high to the 12587 low, projected from the 13173 high = 13107 (point 1 to point 2 from point 7)
- 1.0 projection from the 12847 high to the 12782 low, projected from the 13173 high = 13108 (point 3 to point 5 from point 7)
- 1.0 projection from the 12843 high to the 12782 low, projected from the 13173 high = 13112 (point 4 to point 5 from point 7)

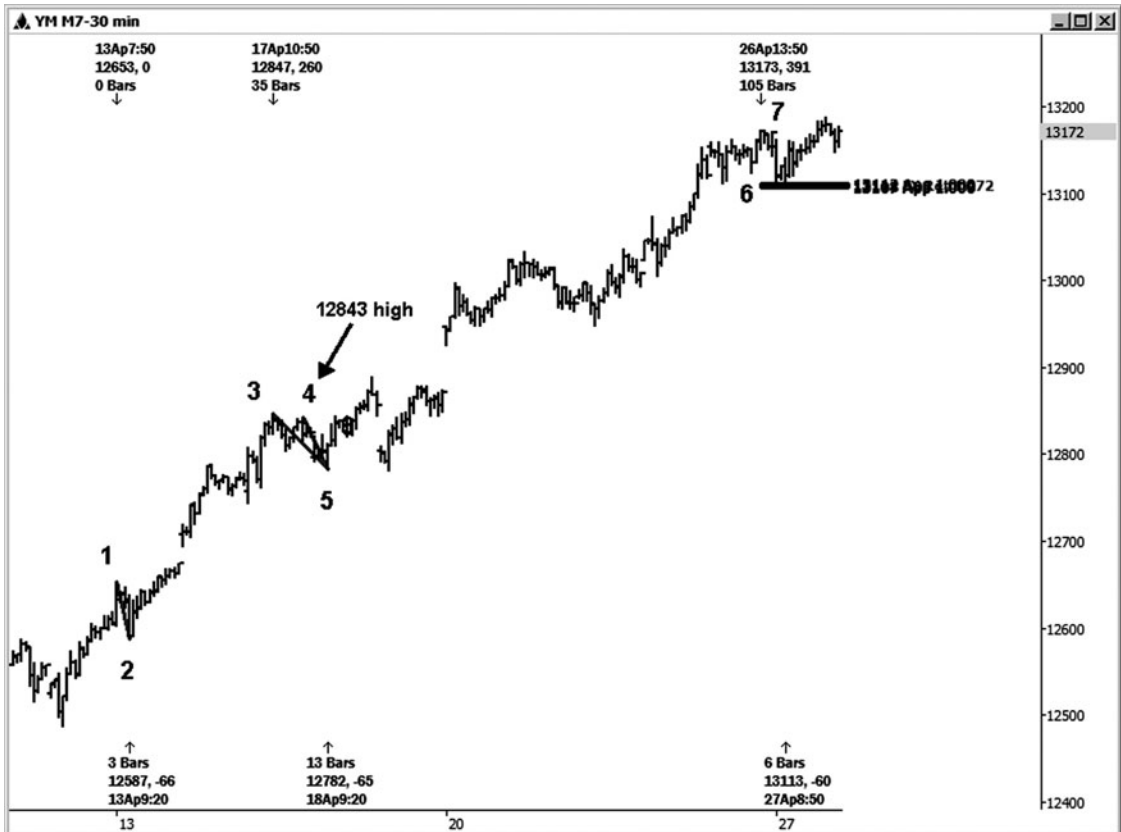


FIGURE 6-9

Figure 6-10 illustrates the price extension that overlapped the prior symmetry projections.

1.272 extension of the 13124 low to the 13173 high = 13111
(point 6 to point 7)

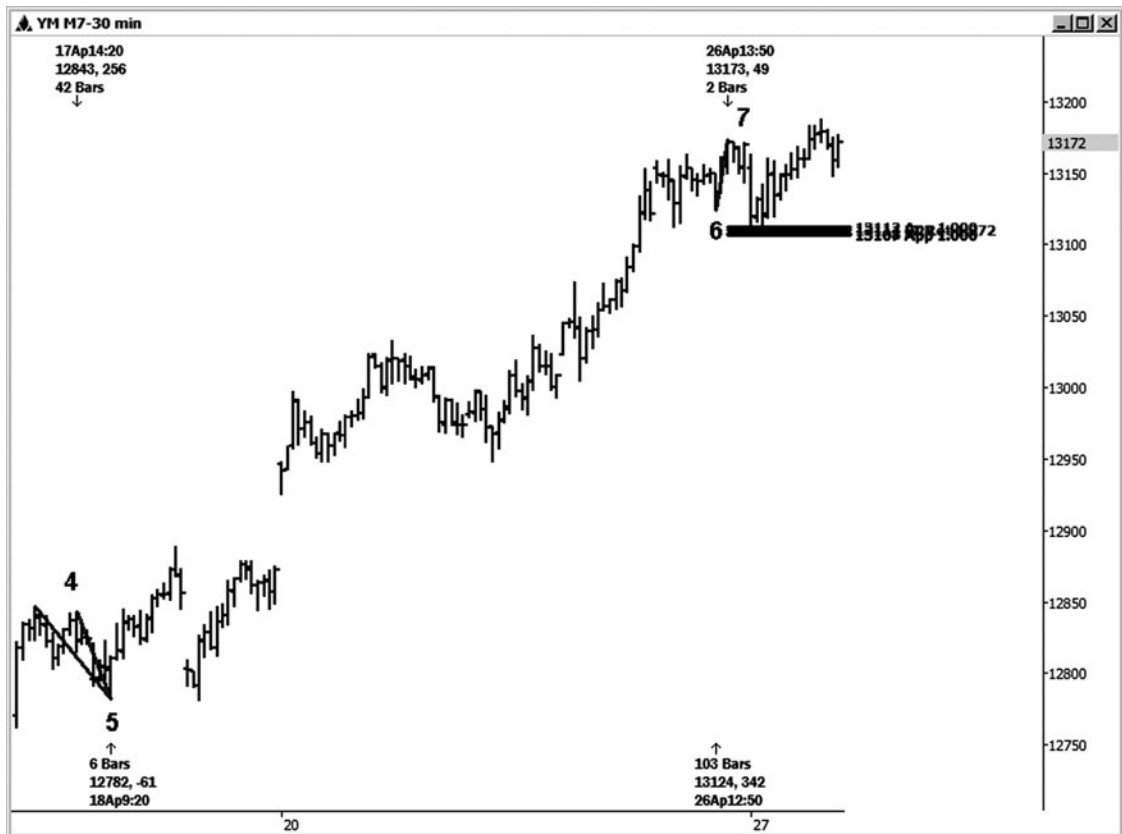


FIGURE 6-10

Next let's look at another example on the mini-sized Dow, this time on a 15-minute chart. The general pattern in Figure 6-11 was bearish, which is why I focused on setting up the sell side in this example. An important price cluster high was made at 12622. Let's go through the actual swings and the creation of the cluster, and see how you could have used this information to your advantage.

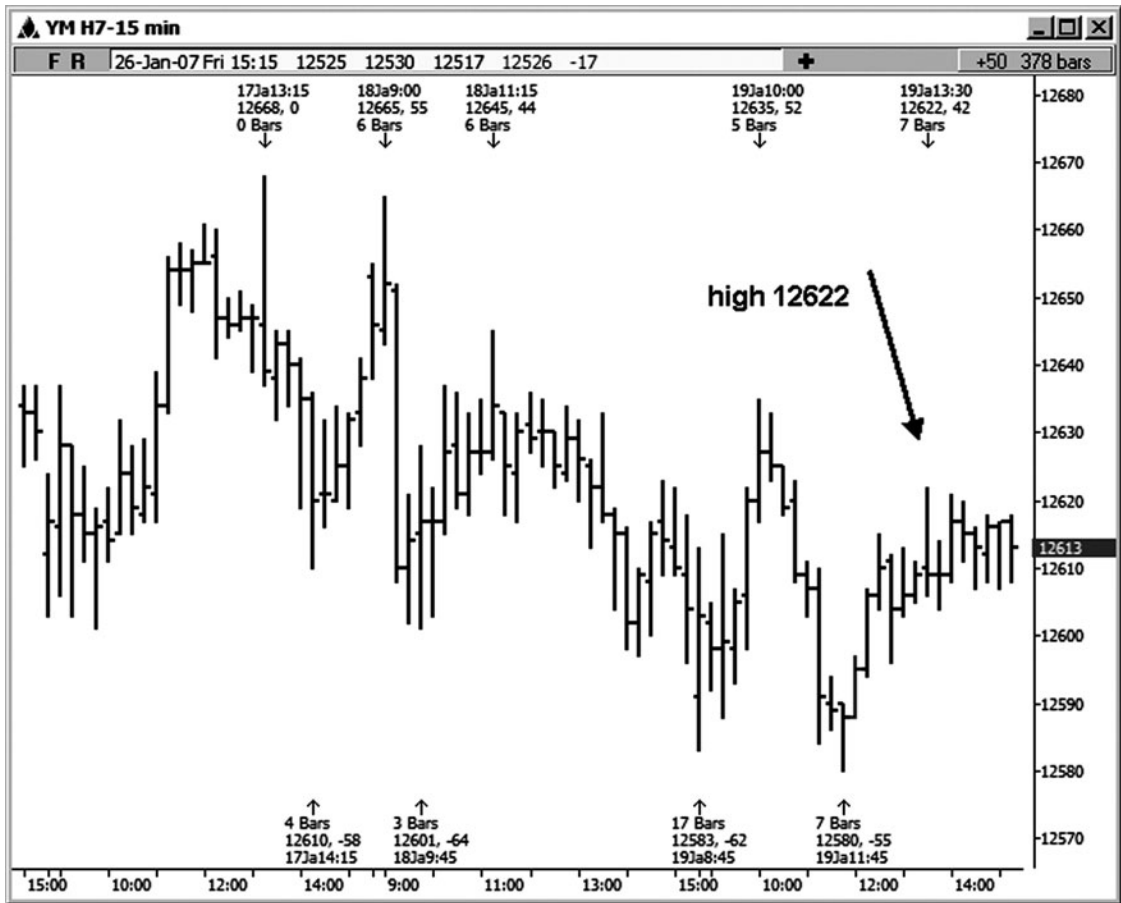


FIGURE 6-11

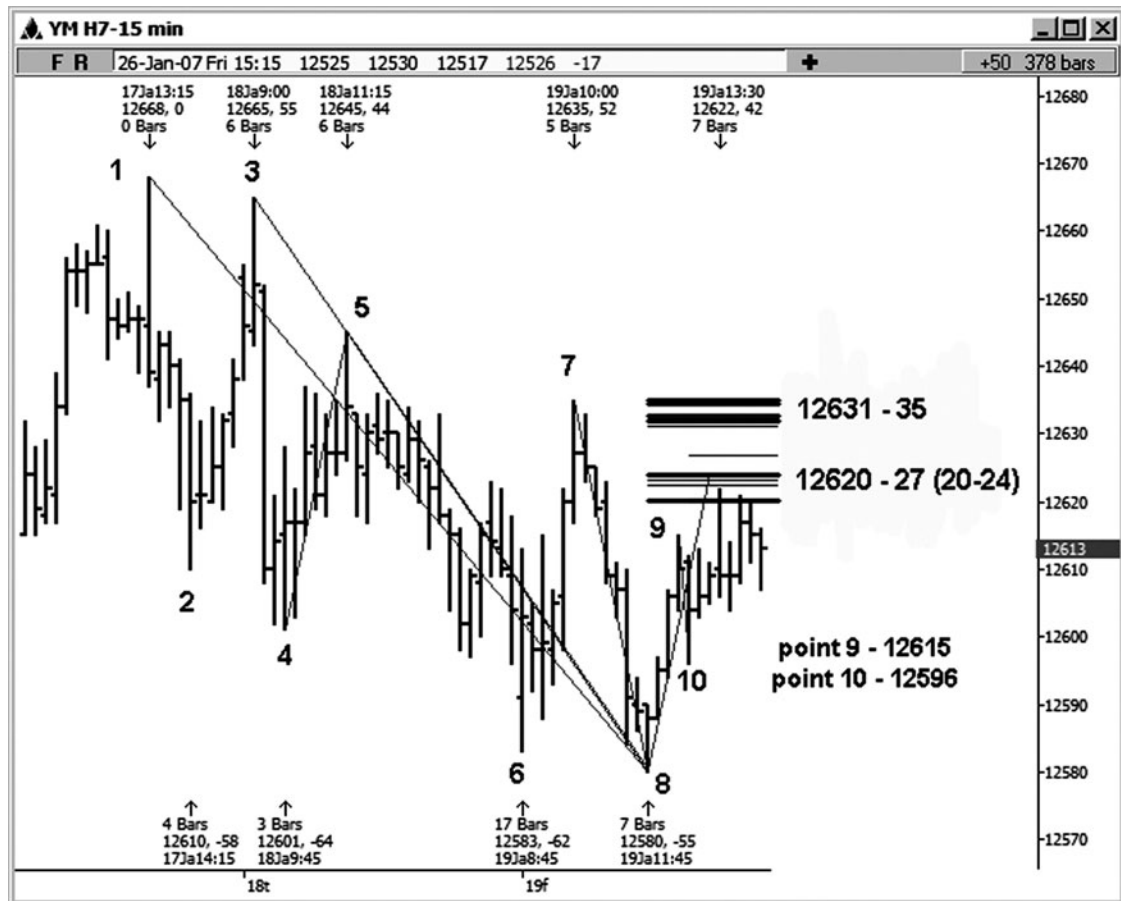


FIGURE 6-12

A healthy cluster of price relationships came in at the 12620–12627 area in this example. Figure 6-12 shows the individual price relationships that defined this cluster. In this example, I have numbered the key swing highs and lows for you to follow along with the analysis.

- .50 retracement of the 12668 high to the 12580 low = 12624 (point 1 to point 8)
- .50 retracement of the 12665 high to the 12580 low = 12623 (point 3 to point 8)

- .618 retracement of the 12645 high to the 12580 low = 12620
(point 5 to point 8)
- .786 retracement of the 12635 high to the 12580 low = 12623
(point 7 to point 8)
- 1.0 projection of the 12601 low to the 12645 high, projected from the
12580 low = 12624 (point 4 to point 5 projected from point 8)
- 1.272 extension of the 12615 high to the 12596 low = 12620
(point 9 to point 10)
- 1.618 extension of the 12615 high to the 12596 low = 12627
(point 9 to point 10)

Note that the swing from point 9 to point 10 was minor compared with most of the swings used for this analysis. If you are just learning this type of work, it may be difficult to identify that swing. I've been doing this work long enough, however, to know that this swing, which would be more obvious on a five-minute chart, would be a good confirming ratio for this cluster zone.

On this particular chart, I also left the projections for another cluster that developed right above our initial example at the 12631–12635 area. It is not unusual for more than one cluster zone to develop on the chart you are analyzing. In most of my book examples, however, I will erase the other price relationships so that we can focus on one setup at a time.

This price cluster setup was one of the *higher-probability setups*, since it was set up in the direction of the trend of this 15-minute chart which was down. With the standout resistance identified at the 12620–12627 area, as long as the market did not violate this resistance by any meaningful margin, you would look at taking any sell triggers that coordinate with this trade setup (see Figure 6-13). The initial decline from the high made at 12622 lasted 119 points. It looks like it would have taken a while to trigger an entry, but if you were patient and used good money management skills, it would have been worth quite a bit of cash.

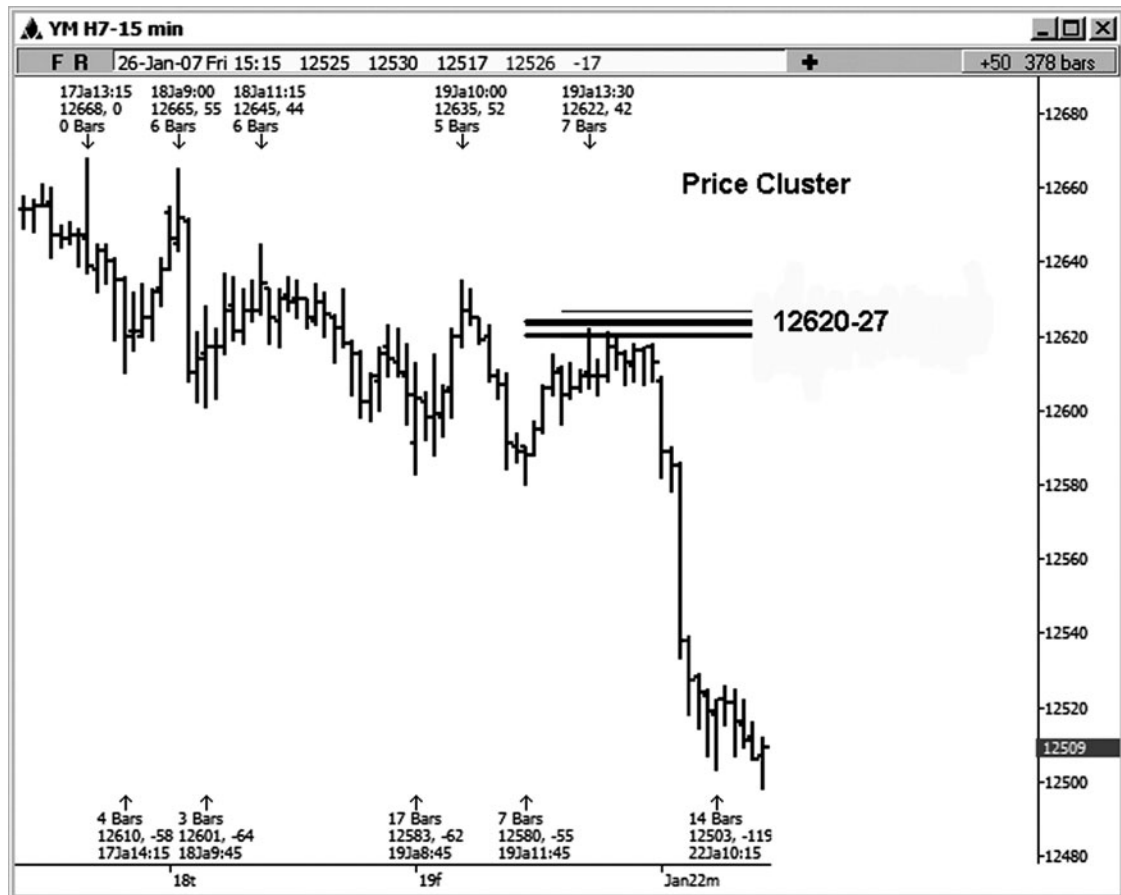


FIGURE 6-13

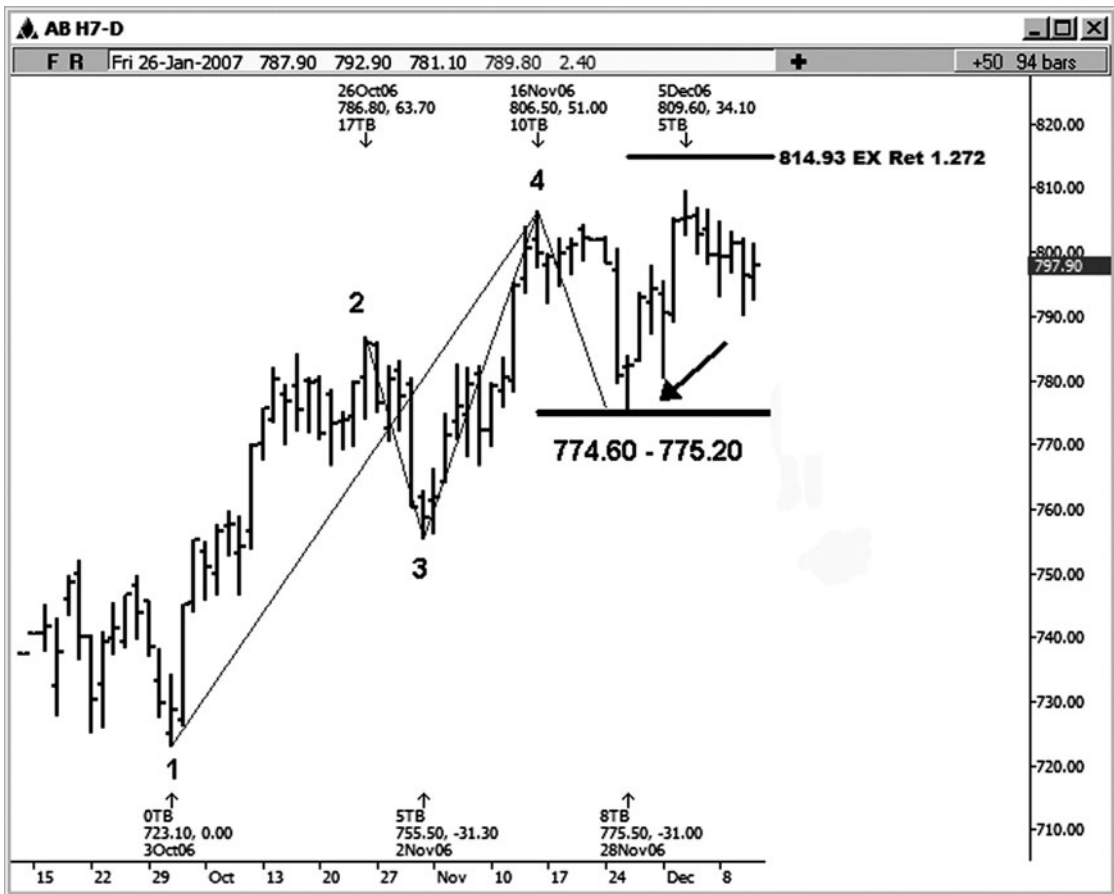


FIGURE 6-14

Our next example is on the E-mini Russell contract, the March 2007 daily chart (see Figure 6-14). This price cluster came in between 774.60 and 775.20 and included three key price relationships:

- .382 retracement of the 723.10 low to the 806.50 high = 774.60 (point 1 to point 4)

- .618 retracement of the 755.50 low to the 806.50 high = 775.00 (point 3 to point 4)

- 1.0 projection of the 786.80 high to the 755.50 low, projected from the 806.50 high = 775.20 (point 2 to point 3 projected from point 4)

The actual low was made at 775.50, which was within 3 ticks of the top of the cluster zone—an acceptable margin. A full 34-point rally followed this cluster setup.

The cluster illustrated in Figure 6-15 was developed on the daily cash SPX chart. This price cluster came in at the 1401.75–1405.07 area that included the coincidence of at least five price relationships:

- .382 retracement of the 1360.98 low to the 1431.81 high = 1404.75 (point 2 to point 5)
- .50 retracement of the 1377.83 low to the 1431.81 high = 1404.82 (point 4 to point 5)
- 1.272 extension of the 1410.28 low to the 1429.42 high = 1405.07 (point 6 to point 7)
- 1.0 projection of the 1407.89 high to the 1377.83 low, projected from the 1431.81 high = 1401.75 (point 3 to point 4 projected from point 5)
- 1.0 projection of the 1389.45 high to the 1360.98 low, projected from the 1431.81 high = 1403.34 (point 1 to point 2 projected from point 5)

The low was made directly within the cluster zone at the 1403.97 level. A rally of 36.72 followed.

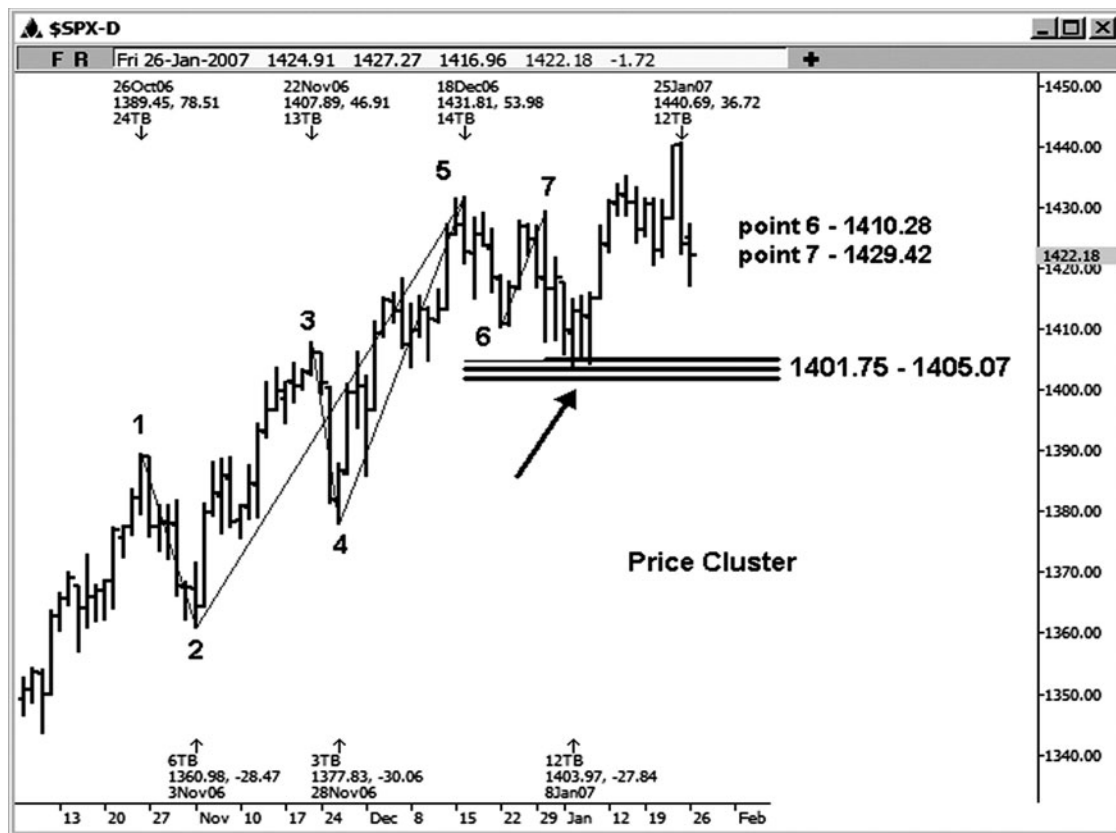


FIGURE 6-15

This next example is a five-minute chart of the March 2007 E-mini S&P contract (see Figure 6-16). Here we have a cluster of three Fibonacci price relationships at the 1443.75–1444.25 area:

- .618 retracement of point 2 to point 4 = 1444.25
- 1.272 price extension of point 3 to point 4 = 1444.00
- 1.0 projection of point 1 to point 2 projected from point 4 = 1443.75

The market was in a general uptrend on this chart. The actual low in this case was made at 1444.00. The initial rally off this low ran for 7.75 points, or a value of \$387.50.

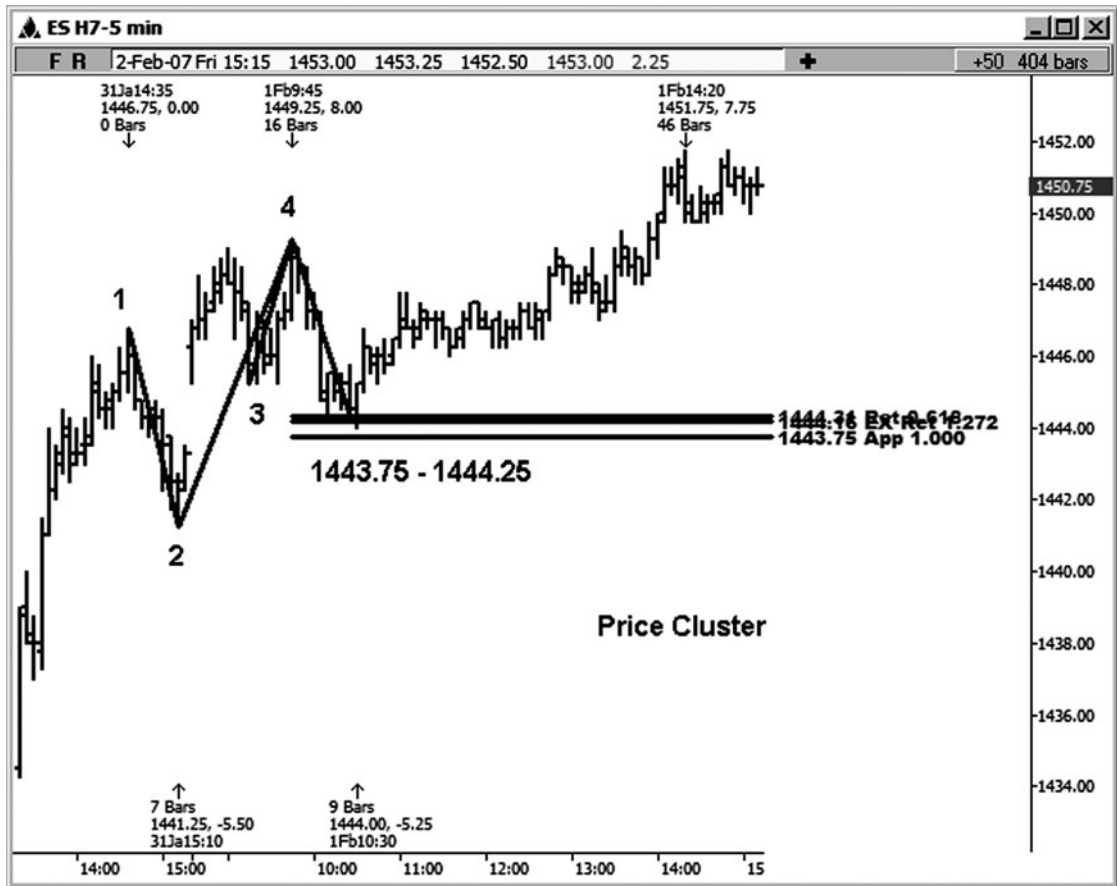


FIGURE 6-16

Let's take a look at an example in GM stock (see Figure 6-17). There was a confluence of three price relationships between 30.00 and 30.07:

.382 retracement of point 1 to point 5 = 30.07

.786 retracement of point 4 to point 5 = 30.00

1.0 projection of point 2 to point 3 projected from point 5 = 30.06

This was one of the higher-probability setups, since the cluster developed in the direction of the uptrend visible on the daily chart. The actual low was made at 30.10, just pennies above the high end of the cluster. It was followed by an initial rally of \$3.90.

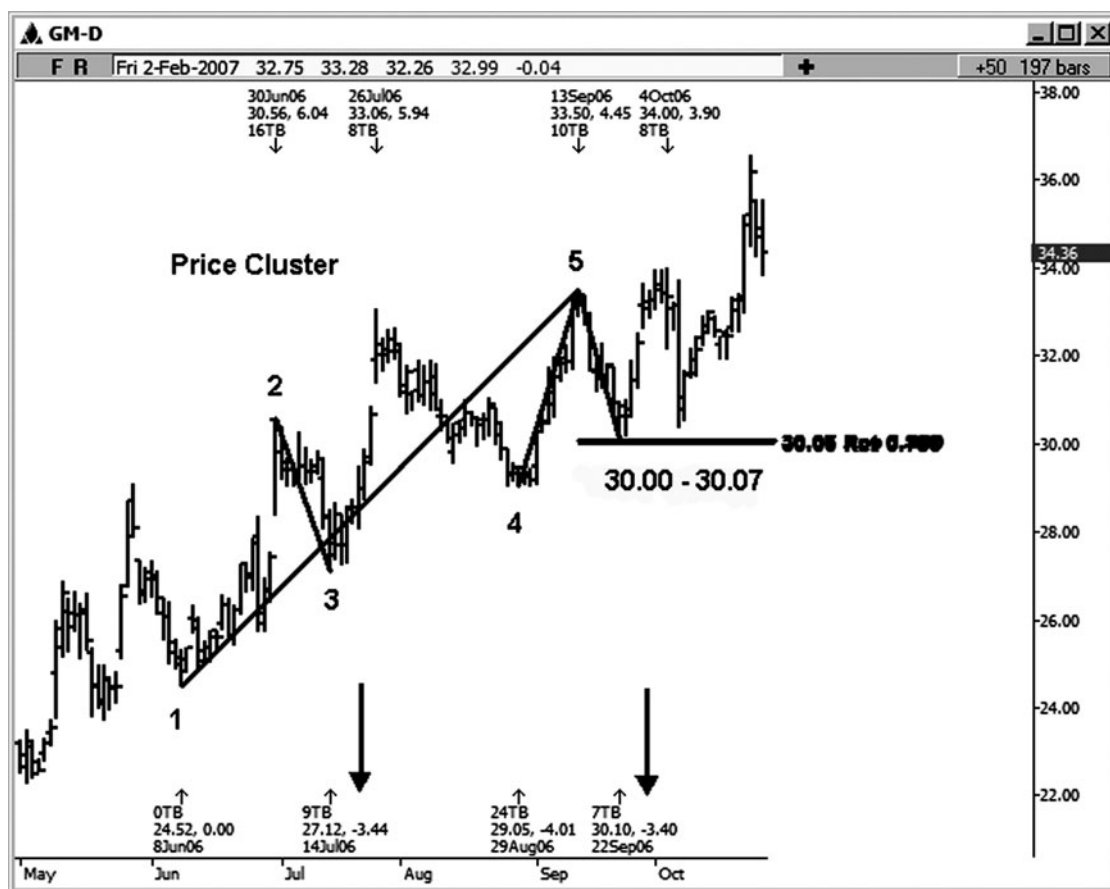


FIGURE 6-17

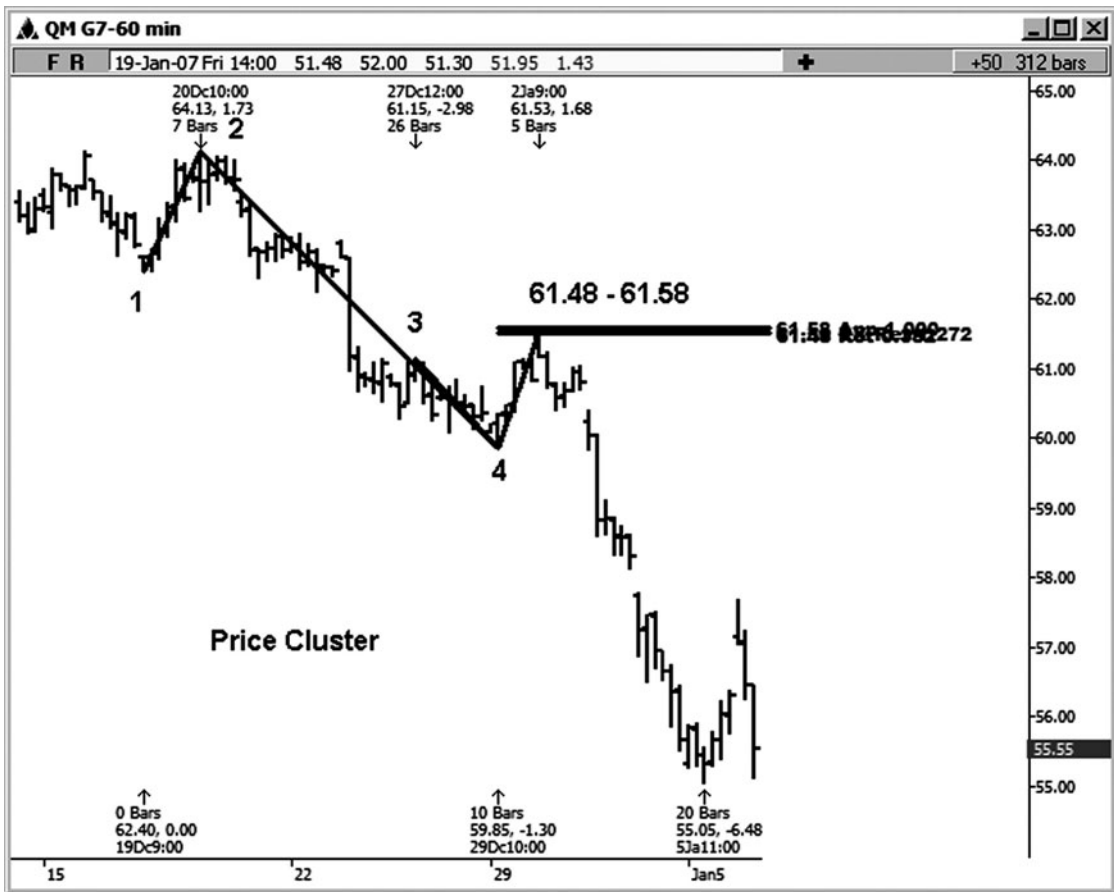


FIGURE 6-18

Figure 6-18 is an example of a 60-minute chart in the mini crude futures February 2007 contract. We were looking at a downtrending market here, so ideally we wanted to set up the resistance or “sell” clusters. A confluence of price relationships came in between 61.48 and 61.58.

.382 retracement of the 64.13 high to the 59.85 low (point 2 to point 4)
= 61.48

1.272 extension of the 61.15 high to the 59.85 low (point 3 to point 4)
= 61.50

100 percent projection of the 62.40 low to the 64.13 high, projected from the 59.85 low (point 1 to point 2 projected from point 4) = 61.58

The actual high in this case was made at 61.53. This cluster high was followed by a \$6.48 decline in just a few trading sessions.

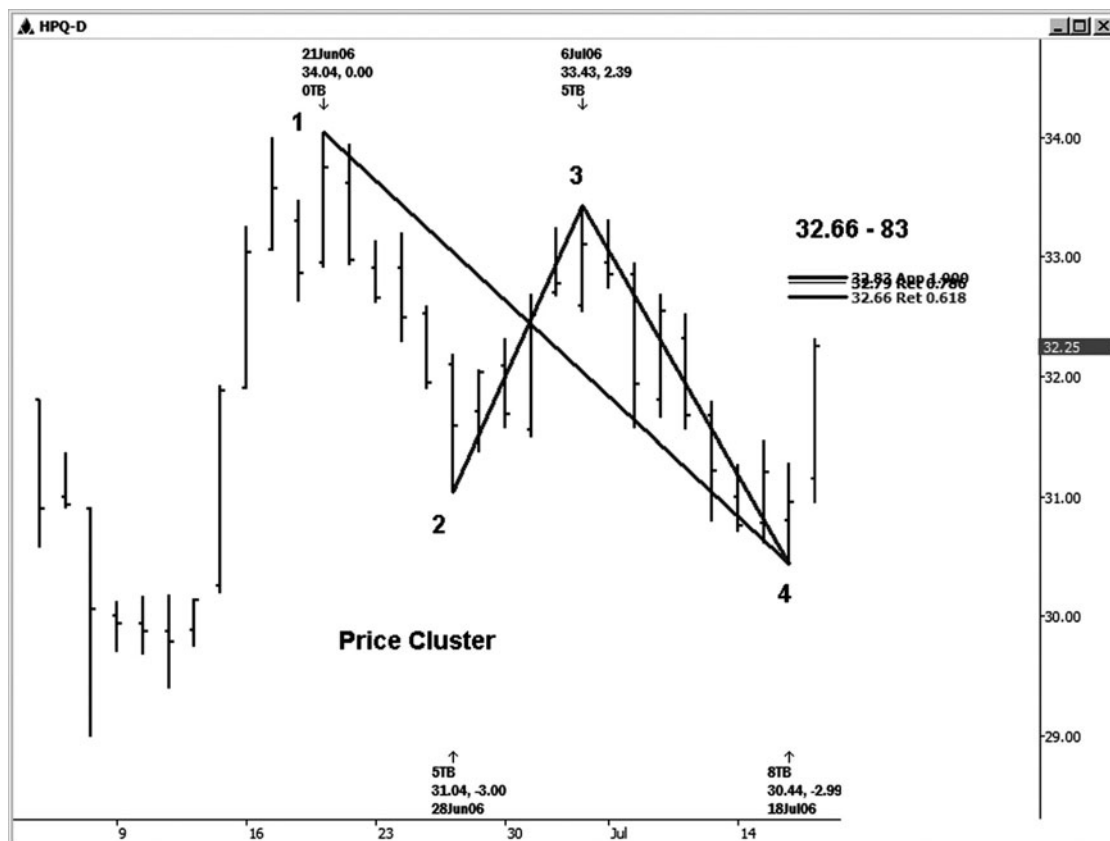


FIGURE 6-19

So far I'm pretty happy with my HP computers, so I decided to take a look at that company's daily stock chart for some market geometry. In Figure 6-19, we needed only four points to run the price relationships. A price cluster developed in the 32.66–32.83 area. In most of my chart examples, I've attempted to make the charts clean and avoid showing the overlapping price relationships, which typically make prices very difficult to read. However, that is exactly what we are looking for in a price cluster. We *love* it when the prices overlap nicely. It means that we have a beautiful confluence of price relationships. (It's hard to explain to your editor that the prices are supposed to be unreadable! I've chosen *not* to doctor up this example to show you what it should look like.)

The price relationships that defined this cluster were:

.618 retracement of the 6/21/06 high to the 7/18/06 low = 32.66
(point 1 to point 4)

.786 retracement of the 7/6/06 high to the 7/18/06 low = 32.79
(point 3 to point 4)

1.0 projection of the 6/28/06 low to the 7/6/06 high, projected from the 7/18/06 low = 32.83 (point 2 to point 3 projected from point 4)

The market was rallying nicely into this key resistance decision. Figure 6-20 will illustrate the results.

A high was made in HPQ at 32.76, which was directly within the price cluster zone. This was followed pretty quickly by a decline of \$2.78. If you look closely at Figure 6-20, you can also see another good symmetry example in addition to the one that was included in the price cluster zone. How about the fact that the decline from the 6/21/06 high to the 6/28/06 low was a \$3.00 decline, very similar to the decline from the 7/6/06 high to the 7/18/06 low, which was \$2.99? A rally of \$2.32 followed this simple symmetry projection.

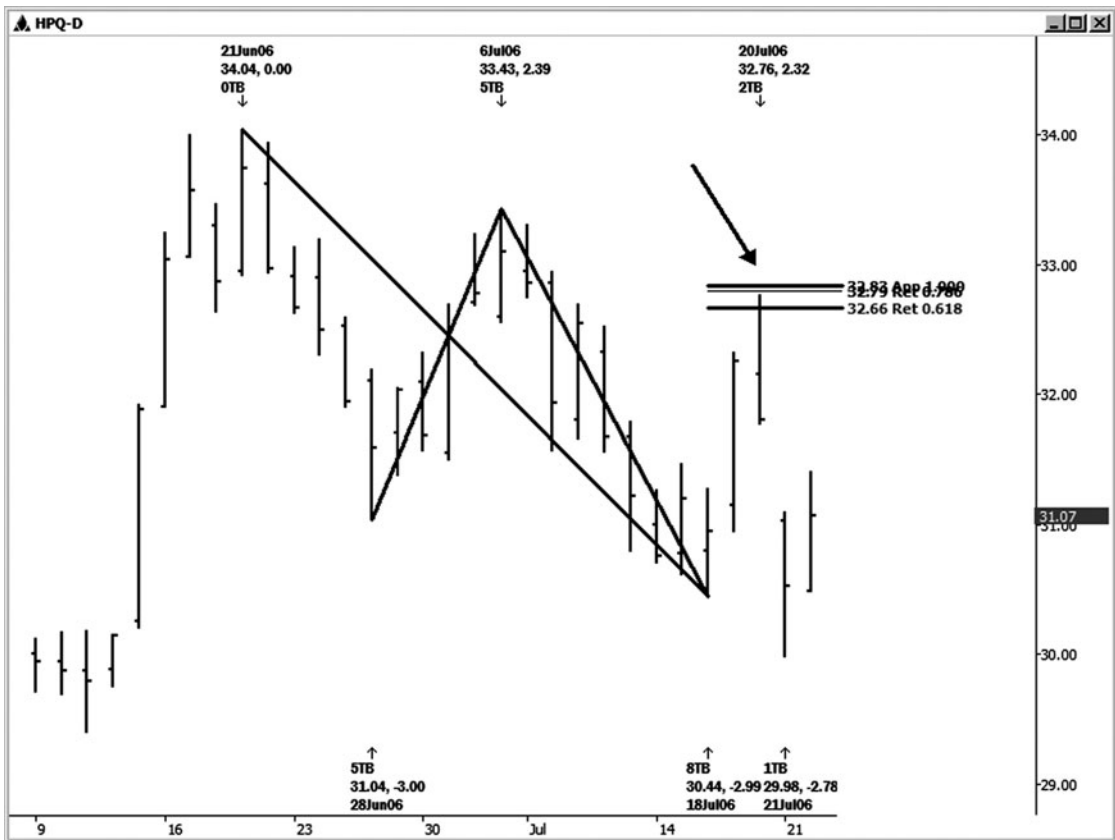


FIGURE 6-20

Author Tip

When someone tries to tell me that the markets are random, I always chuckle silently. It's not worth going through the argument with people who refuse to do their homework and actually study the geometry and patterns in the market. Beyond my mentor and other teachers, I have let the market teach me over the last 20 years or so. So far the market has not *lied* to me, and it has taught me quite a bit. I am still a humble student and continue to learn as time goes on.

There is one more lesson to be learned from the HPQ chart (see Figure 6-21). Although we did see a nice reaction off the original price cluster example at the 32.66–32.83 area, do *not* get stuck on a directional opinion. Use a trailing stop to protect your profits when you are in a good trade setup. Don't assume that the setup will continue working for you



FIGURE 6-21

indefinitely or that it *has* to at least make the initial 1.272 target (29.81 in this case). What the market giveth, the market can take away rather quickly. In other words, be flexible.

This last price cluster setup fell a bit short of the 1.272 target at 29.81, with the low terminating the decline at 29.98. A rather important trend change was seen after this low was made. As long as you used a trailing stop in this trade, you would have walked away with a nice profit. If, however, you had made the assumption that the price would make the 1.272 target, you might have given back much of the profits you had worked so hard for earlier.

The next example is of a price cluster that developed on a 15-minute chart in the March 2007 mini-sized Dow (see Figure 6-22). It included a coincidence of at least five Fibonacci price relationships between 12648 and 12655.

- .236 retracement of point 3 to point 7 at 12654
- .382 retracement of point 6 to point 7 at 12648
- 1.0 projection of point 1 to point 2, projected from point 7 at 12655
- 1.0 projection of point 4 to point 5, projected from point 7 at 12653
- 1.618 extension of the 12667 swing low to the 12698 swing high at 12648

This last projection is illustrated in Figure 6-23, since it is difficult to see where it came from. Even though it was from a relatively minor swing on the chart, it was a good confirming extension that overlapped the cluster nicely.

The actual low in this case was made at 12655, which was followed by at least a 59-point rally. Each point in the mini-sized Dow is worth \$5.00 per contract.



Figure 6-23 on the 15-minute mini-sized Dow shows where the minor extension at the 12648 area came from. (It was difficult to see on the previous chart, since it was overlapped by other price relationships.)

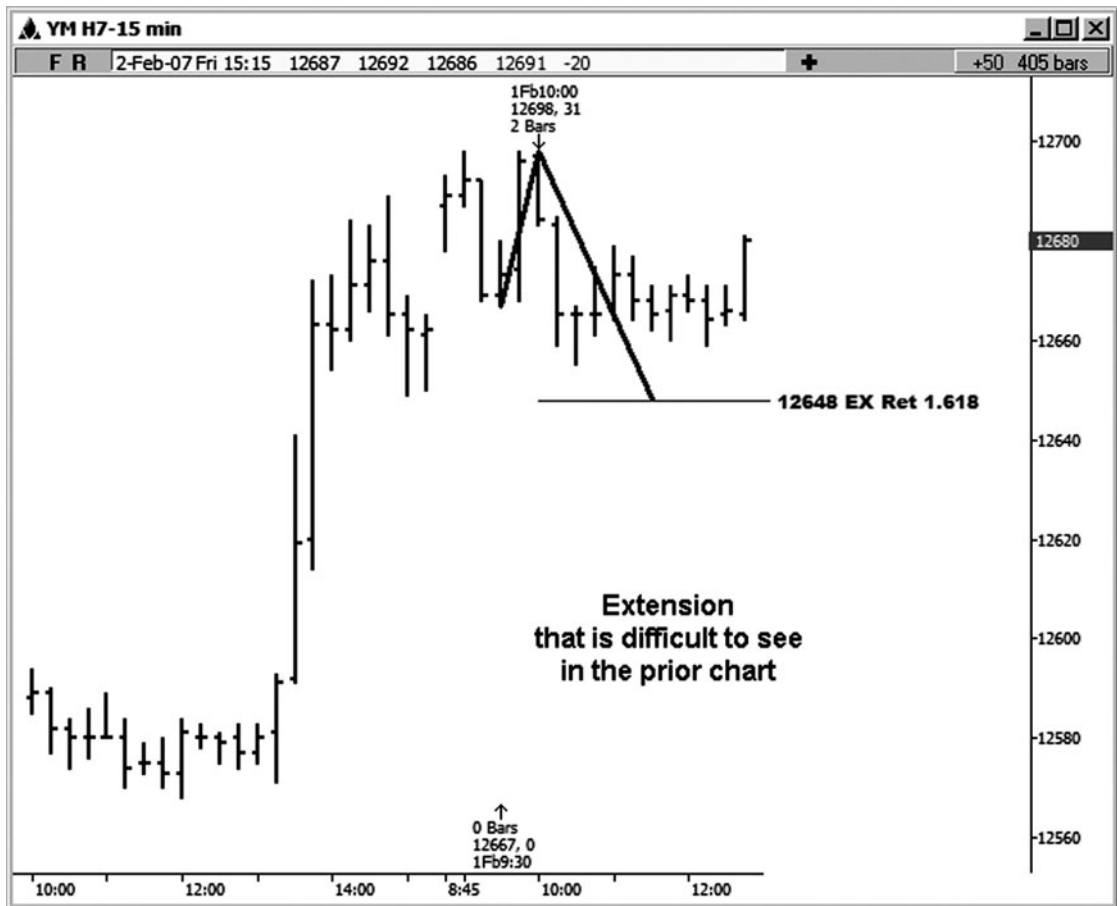


FIGURE 6-23



FIGURE 6-24

In Figure 6-24, the next price cluster example is done on a daily chart of Google. Here I was looking to set up some resistance, since we were looking at a bearish pattern, at that time with lower lows and lower highs. There was a coincidence of four price relationships in the 483.74–486.53 area.

- .50 retracement of the 513.00 high to the 455.02 low = 484.01 (point 1 to point 5)
- .618 retracement of the 506.01 high to the 455.02 low = 486.53 (point 3 to point 5)
- 1.618 extension of the 474.35 high to the 455.02 low = 486.30 (point 4 to point 5)
- 1.0 projection of the 477.29 low to the 506.01 high, projected from the 455.02 low = 483.74 (point 2 to point 3 projected from point 5)

Where I projected the 1.618 extension from might be a little difficult to see or understand. That swing actually might be more visible on a 60-minute chart. Eventually, you will be able to train your eye to find all possible swings that you can use to confirm a price zone as an important decision.

Figure 6-25 shows what happened around that key price cluster decision in Google. A high was made at 484.24, and it was followed by a \$45.56 decline rather quickly. Once Google hit this resistance and failed to clear it, the trader would start looking for sell triggers to enter a short trade using this price cluster resistance.



FIGURE 6-25

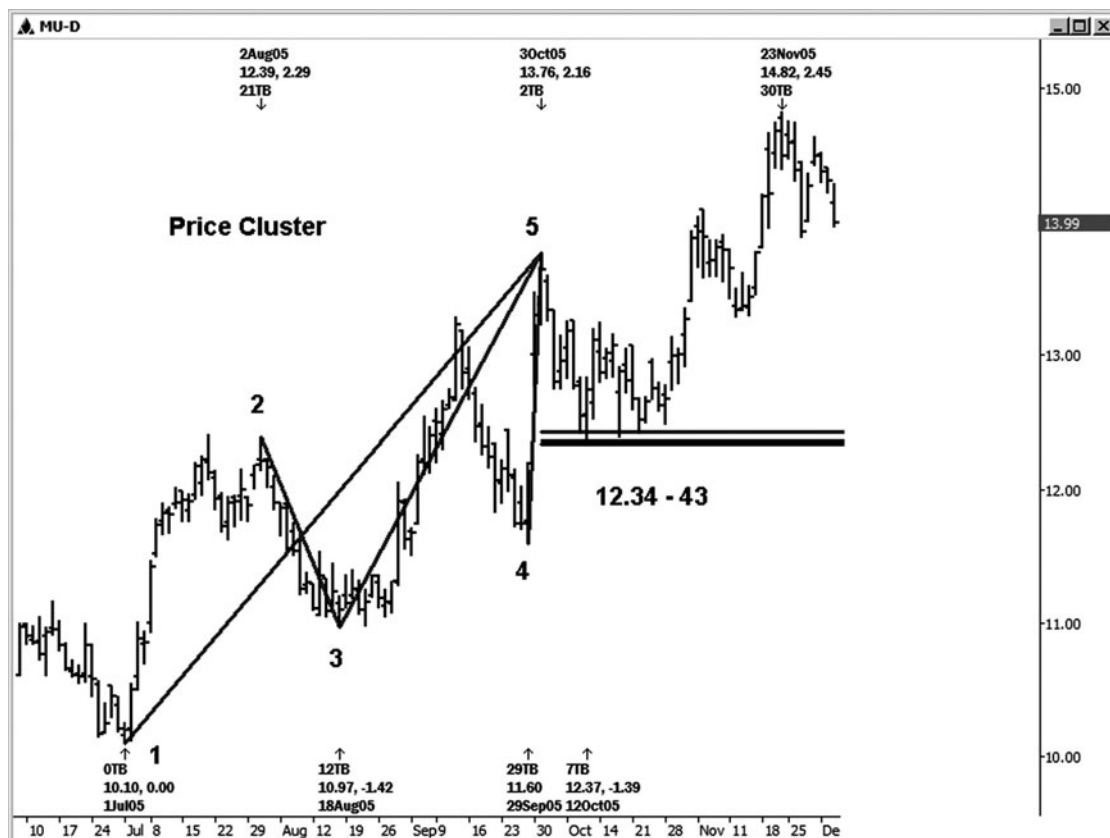


FIGURE 6-26

Micron Technologies gives us a good price cluster example on a daily chart. The support cluster illustrated in Figure 6-26 was first tested on 10/12/05. The cluster developed between the 12.34–12.43 area from the following price relationships:

- .382 retracement of the 7/1/05 low to the 10/3/05 high = 12.36 (point 1 to point 5)
- .50 retracement of the 8/18/05 low to the 10/3/05 high = 12.37 (point 3 to point 5)
- .618 retracement of the 9/29/05 low to the 10/3/05 high = 12.43 (point 4 to point 5)
- 1.0 projection of the 8/2/05 high to the 8/18/05 low, projected from the 10/3/05 high = 12.34 (point 2 to point 3 projected from point 5)

An important low was made at 12.37, which was directly within the price cluster zone. We saw an eventual move to 14.82 from this low.

Author Tip

Note that I haven't numbered the highs and lows in these next few examples. By now you should have an idea of what we're doing, and you can still see where the price relationships were projected from by following the dates on the chart.

Here is a nice little cluster on a daily chart of Honeywell stock that developed in the 41.38–41.56 area (see Figure 6-27). This cluster includes the coincidence of four price relationships:

- .382 retracement of the 9/11/06 low to the 12/5/06 high = 41.56
- .786 retracement of the 10/19/06 low to the 12/5/06 high = 41.42
- 1.272 extension of the 11/28/06 low to the 12/5/06 high = 41.38
- 1.0 projection of the 10/18/06 high to the 10/19/06 low, projected from the 12/5/06 high = 41.45

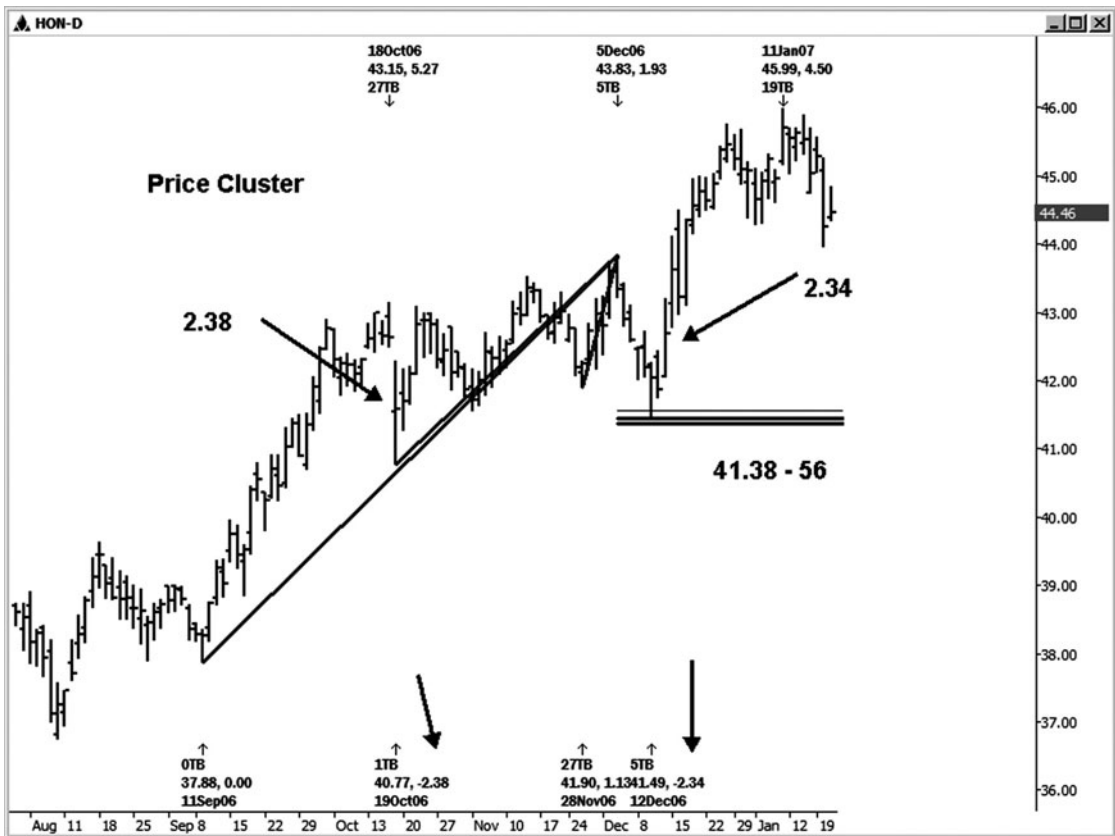


FIGURE 6-27

Another thing to notice on this chart is how the two labeled corrective swings were very similar. One swing was \$2.38 and the second into the cluster zone was \$2.34. The low in HON was made at 41.49, with a \$4.50 rally eventually following that low.

The next price cluster example we are looking at is a daily chart of Merck (see Figure 6-28). With the general pattern of lower lows and lower highs, this is where it would be to your advantage to set up a price cluster on the sell side to agree with the trend of MRK at that time. A cluster with the minimum of three price relationships developed in the 29.44–29.76 area.

.618 retracement of the 7/18/05 high to the 8/22/05 low = 29.76

.50 retracement of the 8/10/05 high to the 8/22/05 low = 29.67

1.0 projection of the 7/7/05 low to the 7/18/05 high, projected from the 8/22/05 low = 29.44

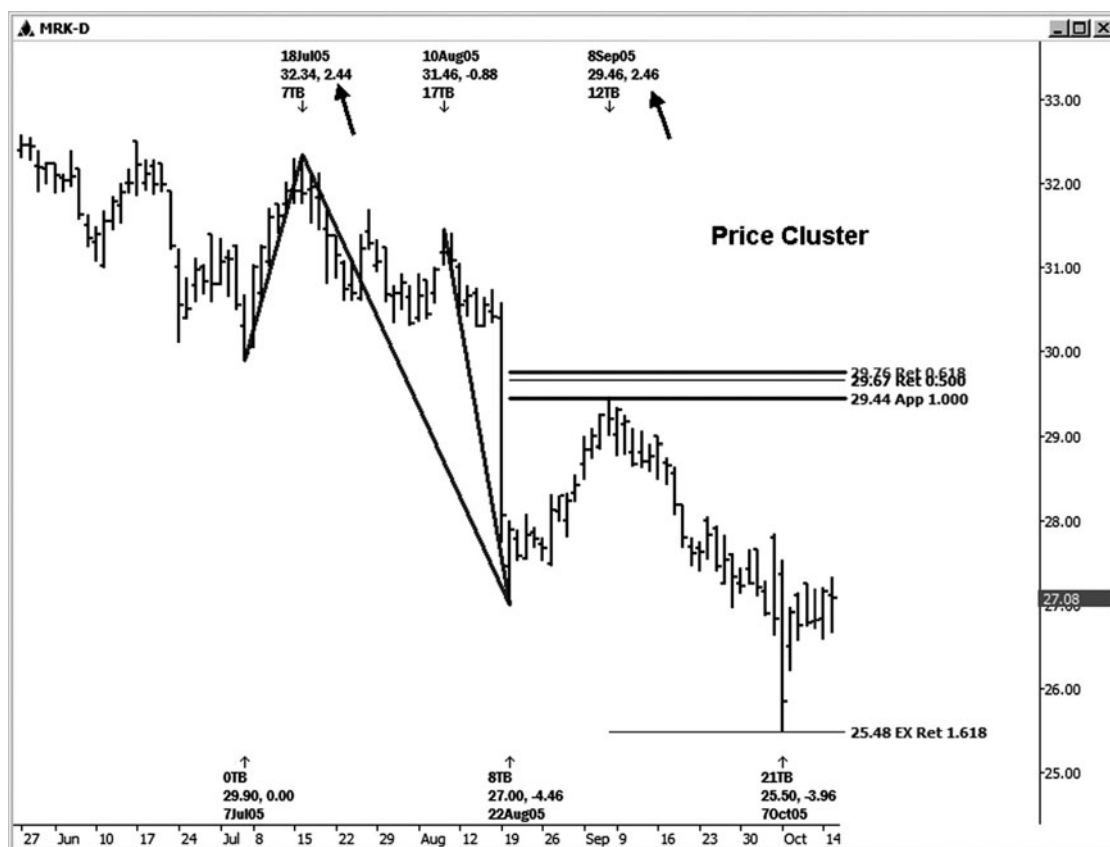


FIGURE 6-28

Notice the symmetry (similarity or equality) of the prior corrective rally to the 7/18/05 high (2.44) and the rally to the 9/8/05 high in the cluster zone (2.46). The high in this case was made just a couple of cents above the low end of the price cluster zone at 29.46 on 9/8/05. This trade setup essentially made the second price target when a \$3.96 decline was seen from the price cluster high. Target 2 came in with the 1.618 extension at the 25.48 level. The 25.50 low was just 2 cents short of this level.

This next price cluster, in General Motors, comes from a coincidence of three key price relationships between 30.00 and 30.08 (see Figure 6-29). You may recognize this chart from the earlier chapter on retracements where I illustrated the .236 retracement by itself. Even though some traders might feel comfortable trading using a single price retracement, I think you would prefer to know that there were at least two more overlapping price relationships in that area!



FIGURE 6-29

The price relationships in the zone were:

- .236 retracement of the 4/5/06 low to the 9/13/06 high = 30.08
- .786 retracement of the 8/29/06 low to the 9/13/06 high = 30.00
- 1.0 projection of the 6/30/06 high to the 7/14/06 low, projected from the 9/13/06 high = 30.06

A low was made at 30.10, just 2 cents above the high end of the cluster zone. This low was followed by a rally of \$3.90.

Figure 6-30 is a reminder that price clusters don't always hold! This is a daily cash chart of the Russell index. There were two key support clusters that stood out on the chart: a zone between 755.40 and 757.57, and then one between 753.06 and 753.32. The clusters developed from symmetry

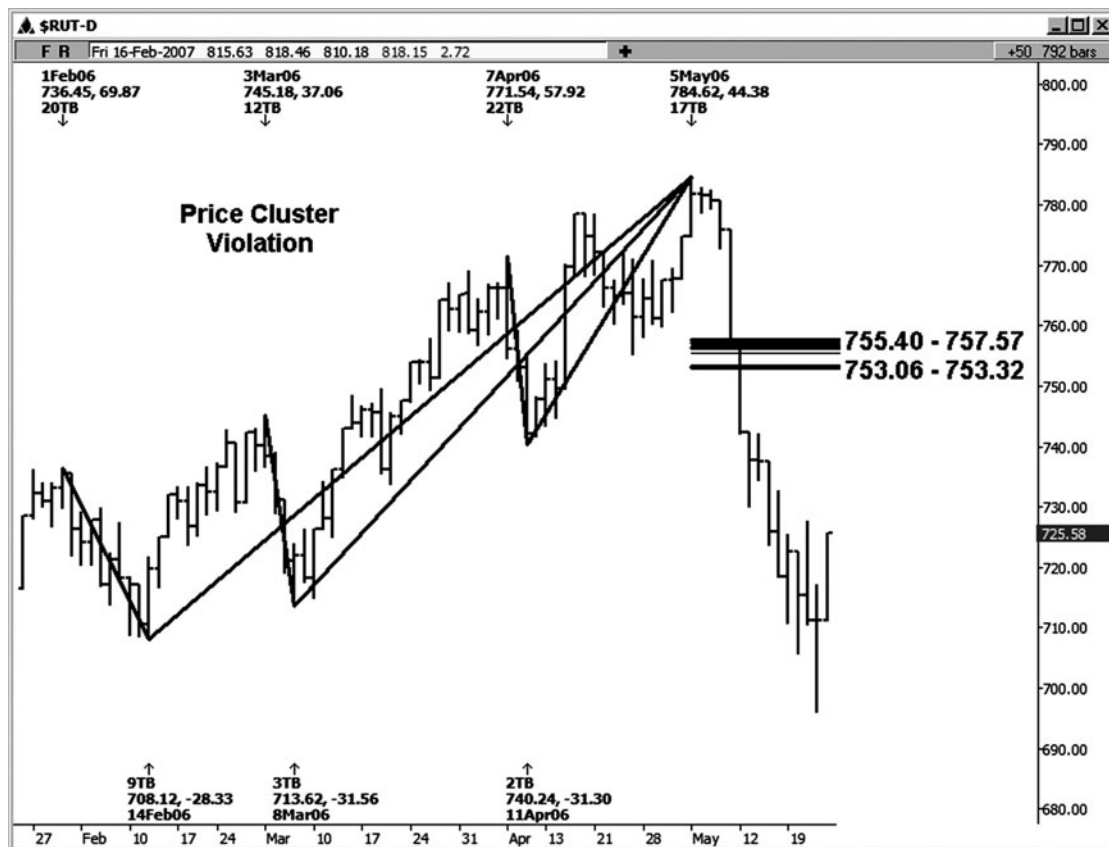


FIGURE 6-30

projections of prior corrective declines along with multiple retracements of the prior swings labeled on the chart. Neither one of these cluster zones held.

As a matter of fact, there are many price clusters that are violated each and every day in this market. You should not expect every cluster zone to hold. We simply want to look at possible trade entries using the ones that do hold, and where we see an actual entry trigger. (Entry triggers will be discussed in a later chapter.)



This chapter walked you through the process of setting up Fibonacci price clusters. These trade setups are very well defined as far as your risk is concerned, along with the definition of a minimum trade target that you can look for if a trade entry is triggered. Even though many of these price cluster zones are violated every day, the ones that hold and trigger offer you a relatively low-risk, high-probability trade setup with excellent risk/reward parameters.

