

# 6

## C H A P T E R

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# FIBONACCI PRICE CLUSTER SETUPS: TRADE SETUP 1

**M**y 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 Lower 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.

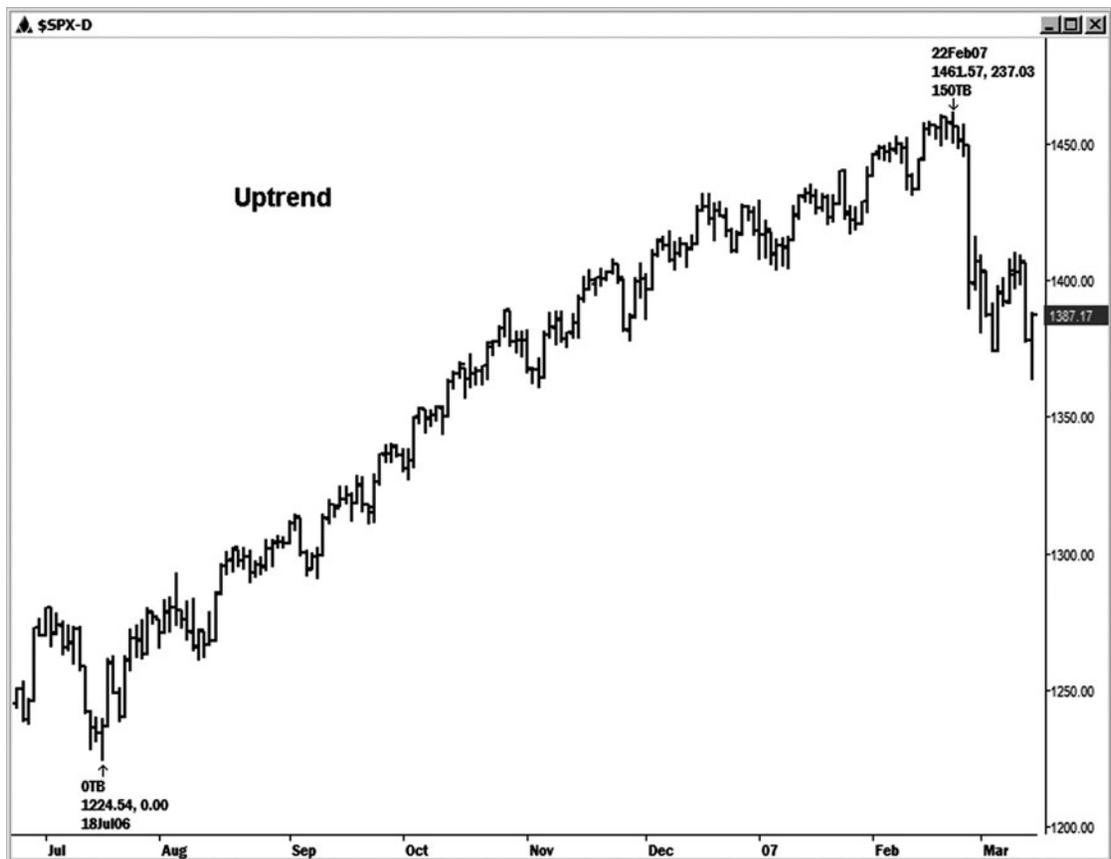
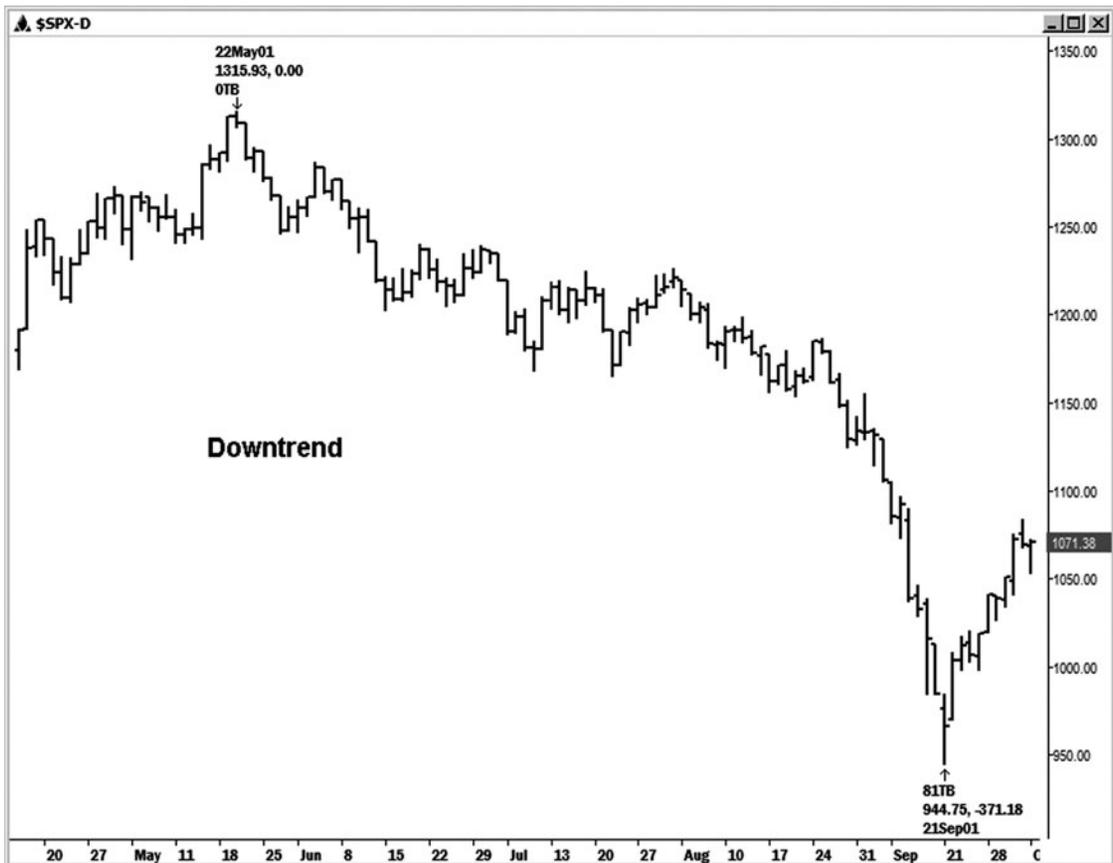


FIGURE 6-1

### **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.)

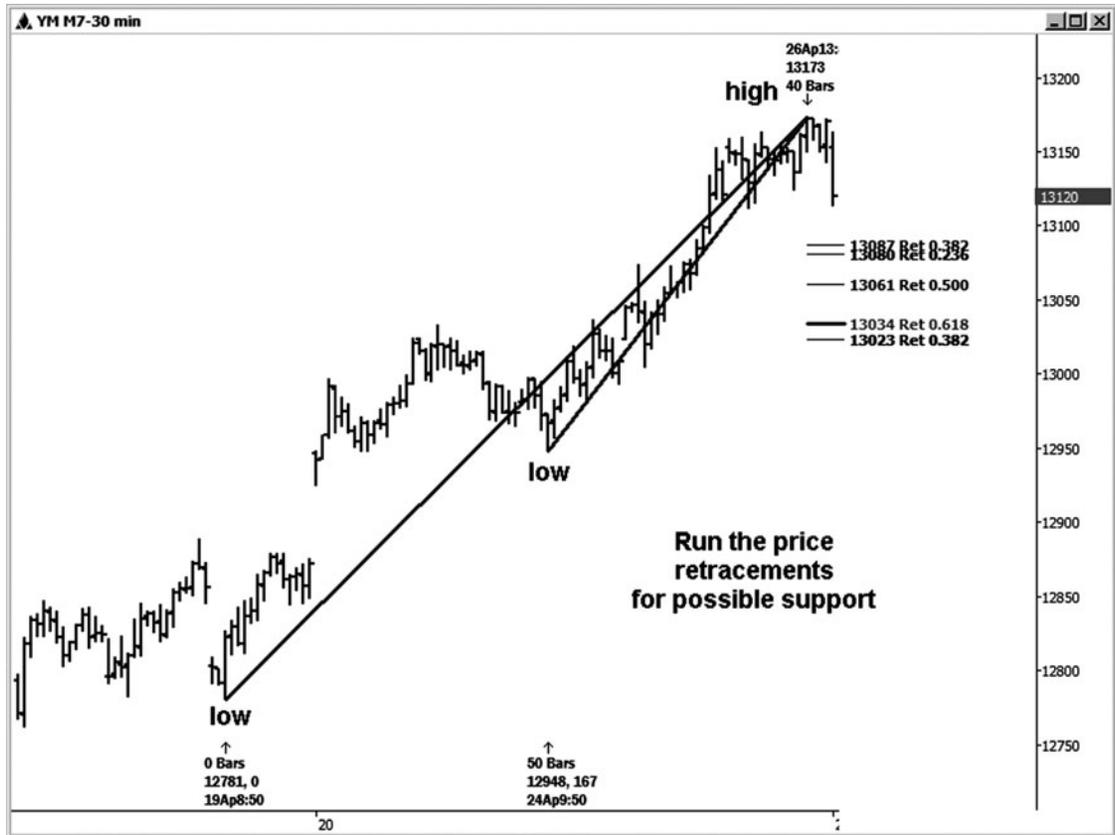


FIGURE 6-4

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.

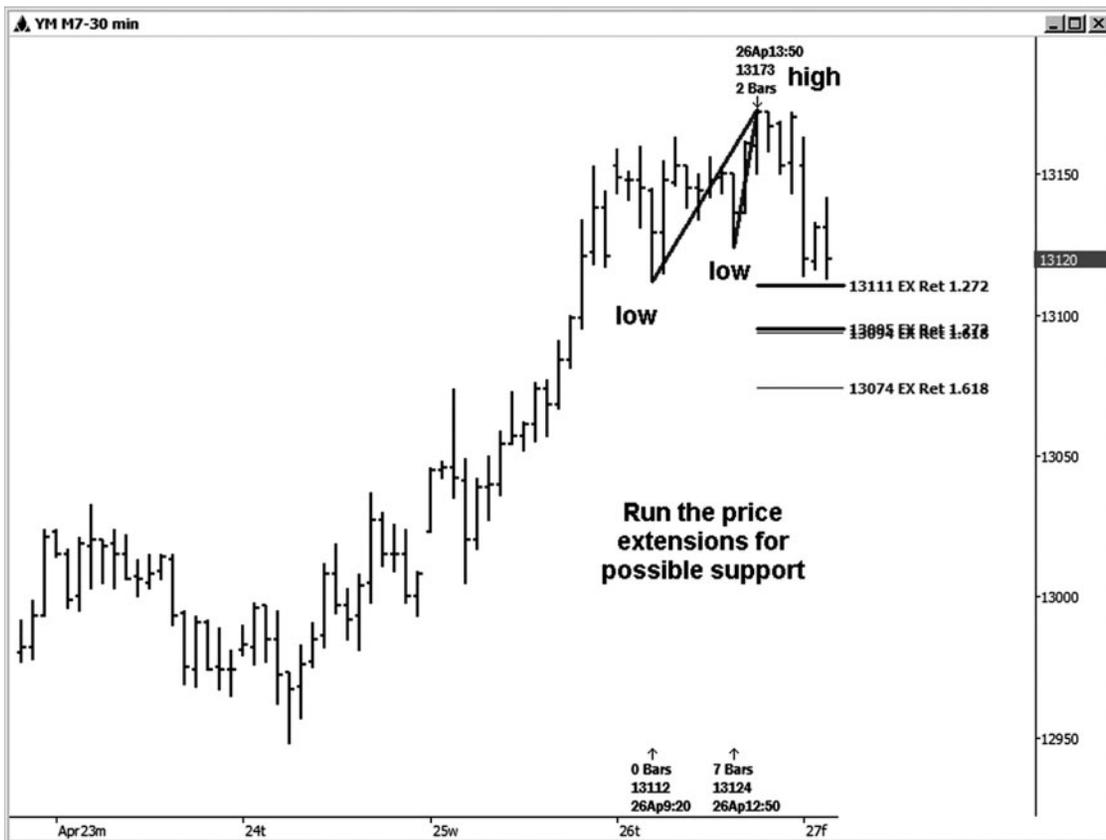


FIGURE 6-5

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.

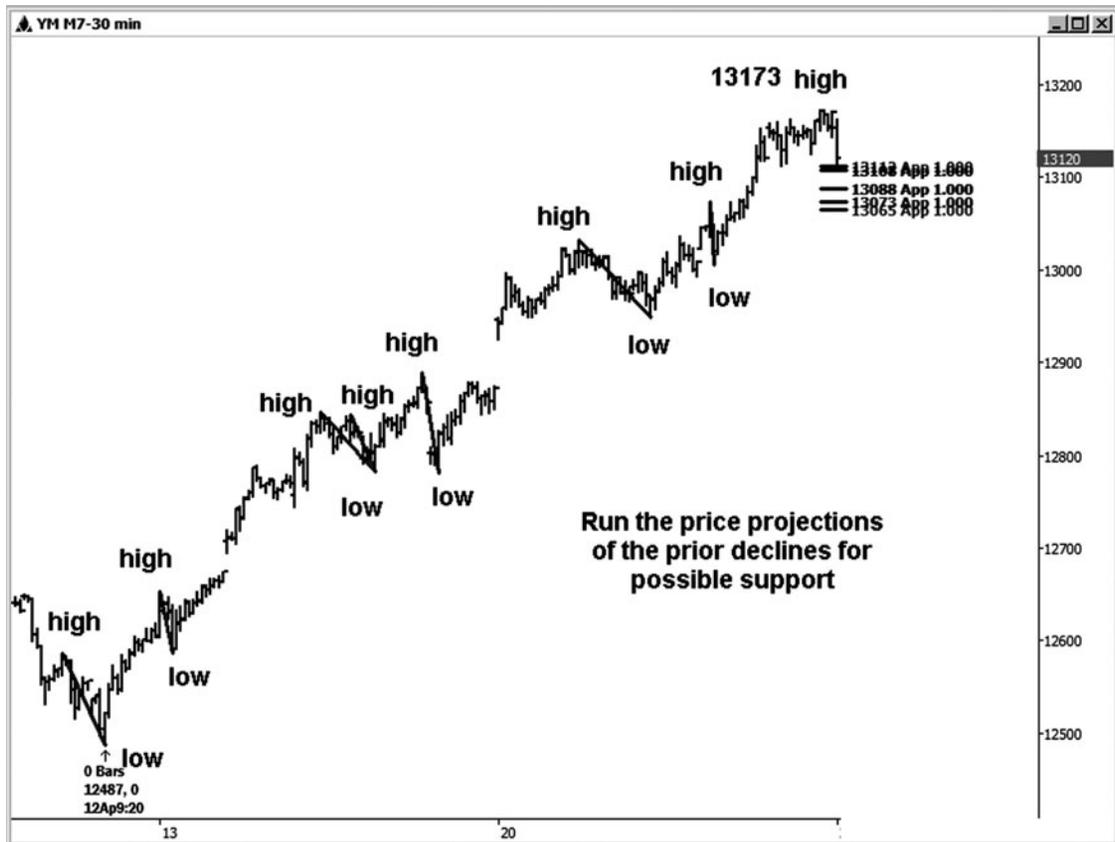


FIGURE 6-6

**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)

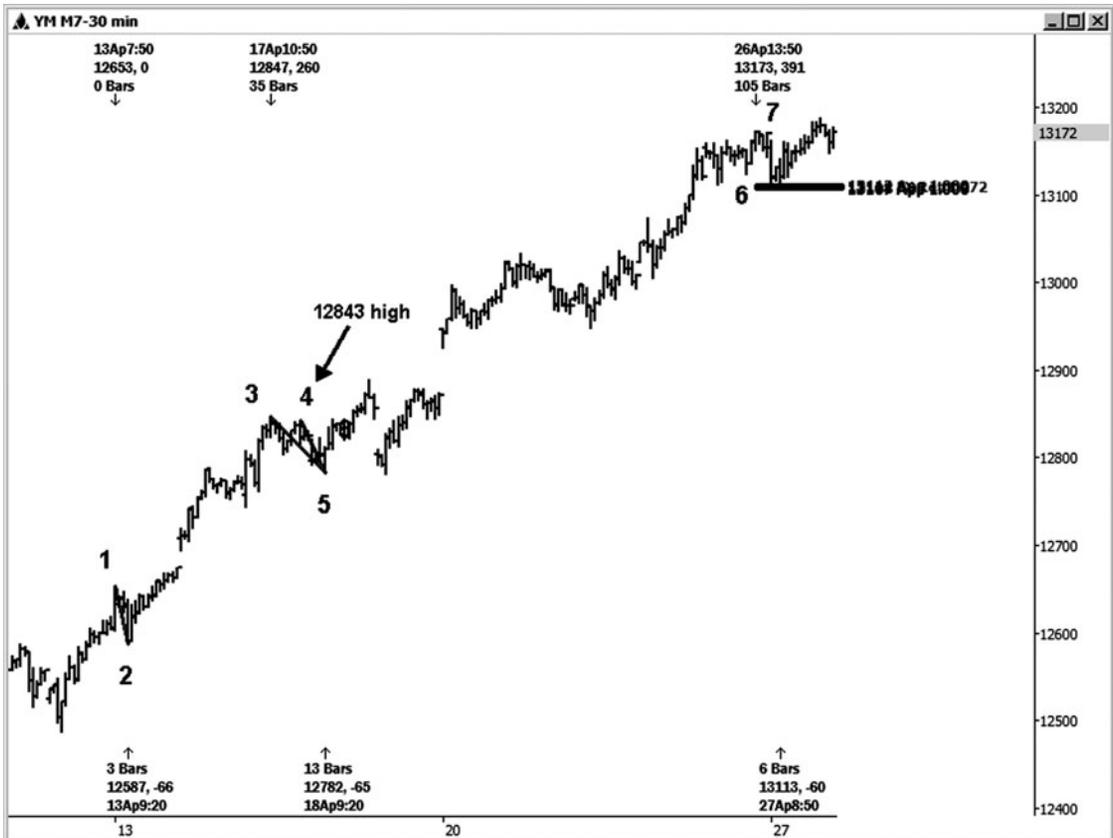


FIGURE 6-9

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)

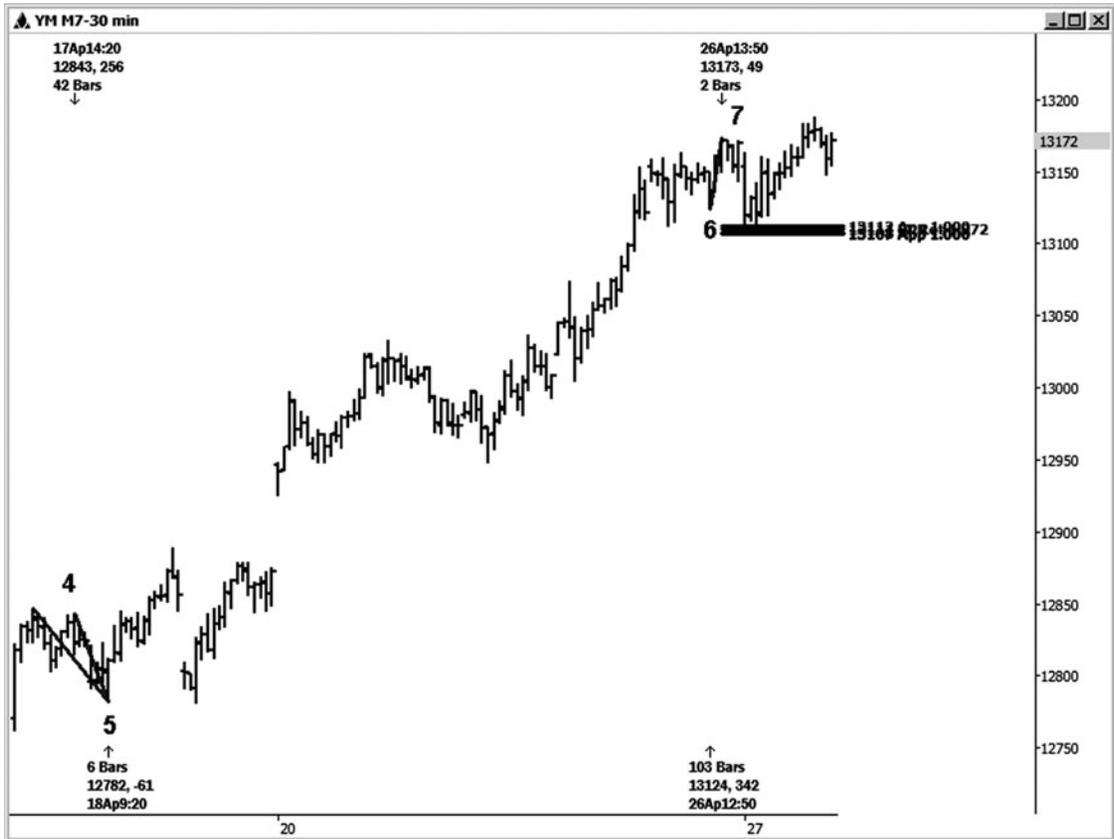


FIGURE 6-10

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.

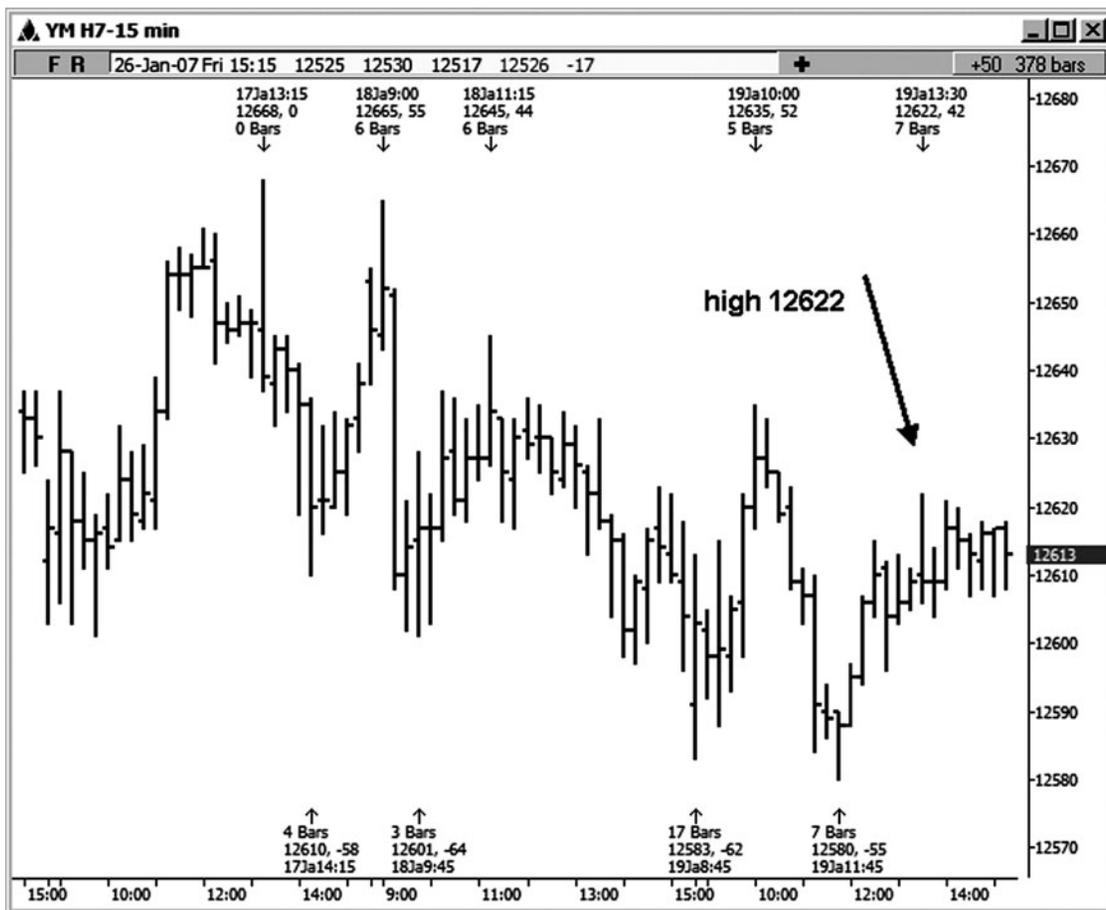


FIGURE 6-11

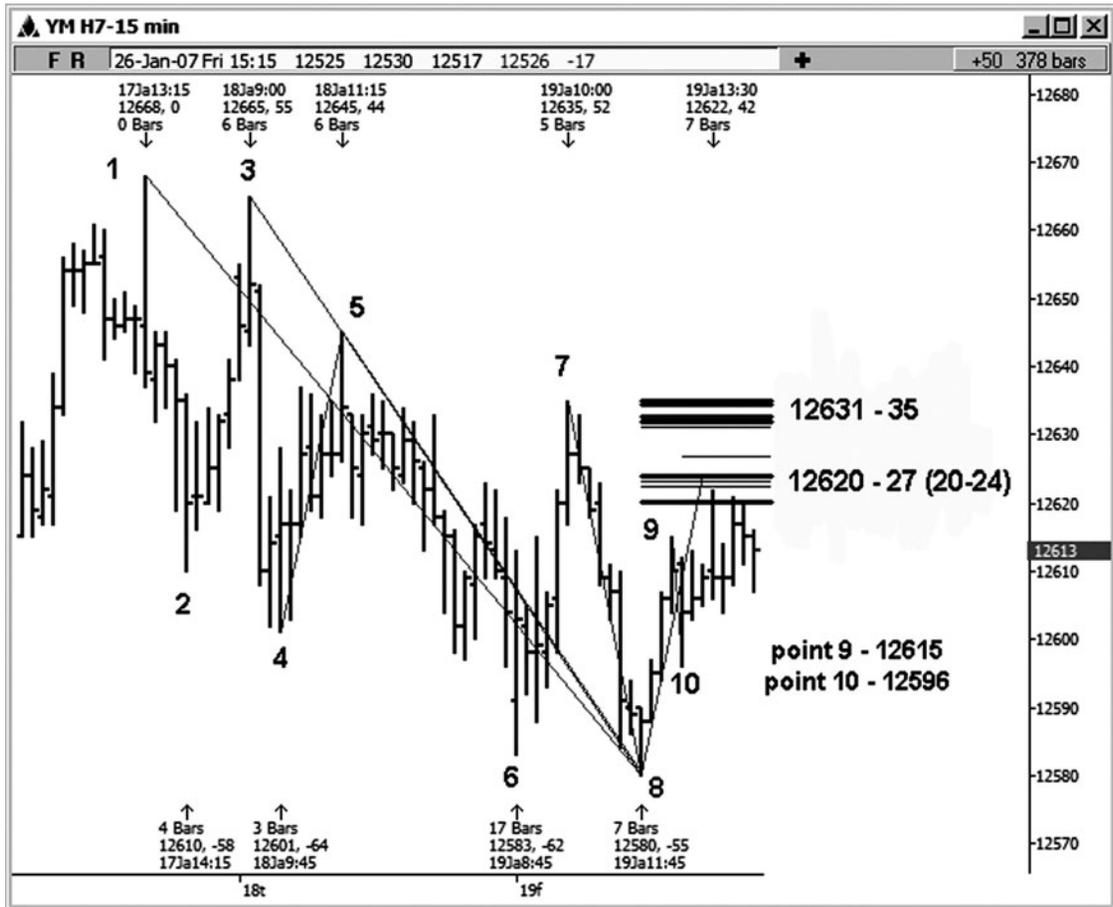


FIGURE 6-12

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.

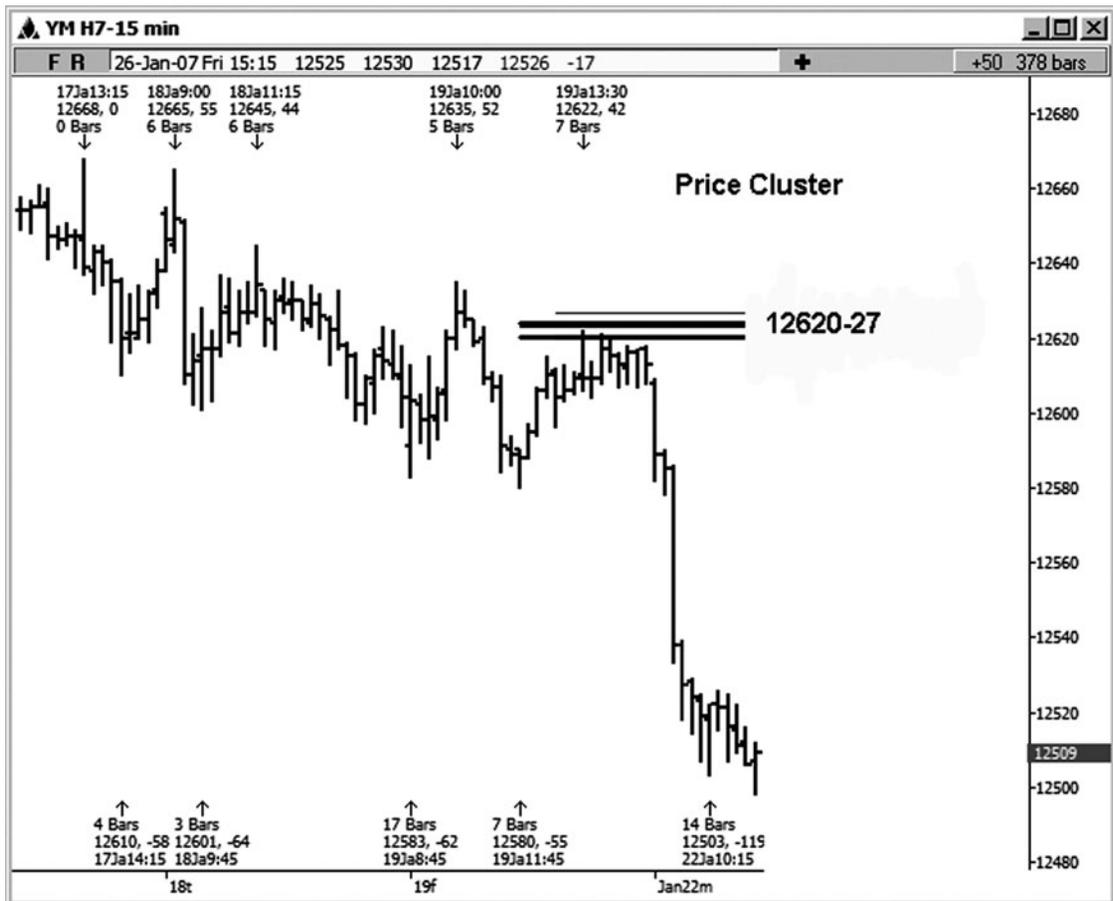


FIGURE 6-13

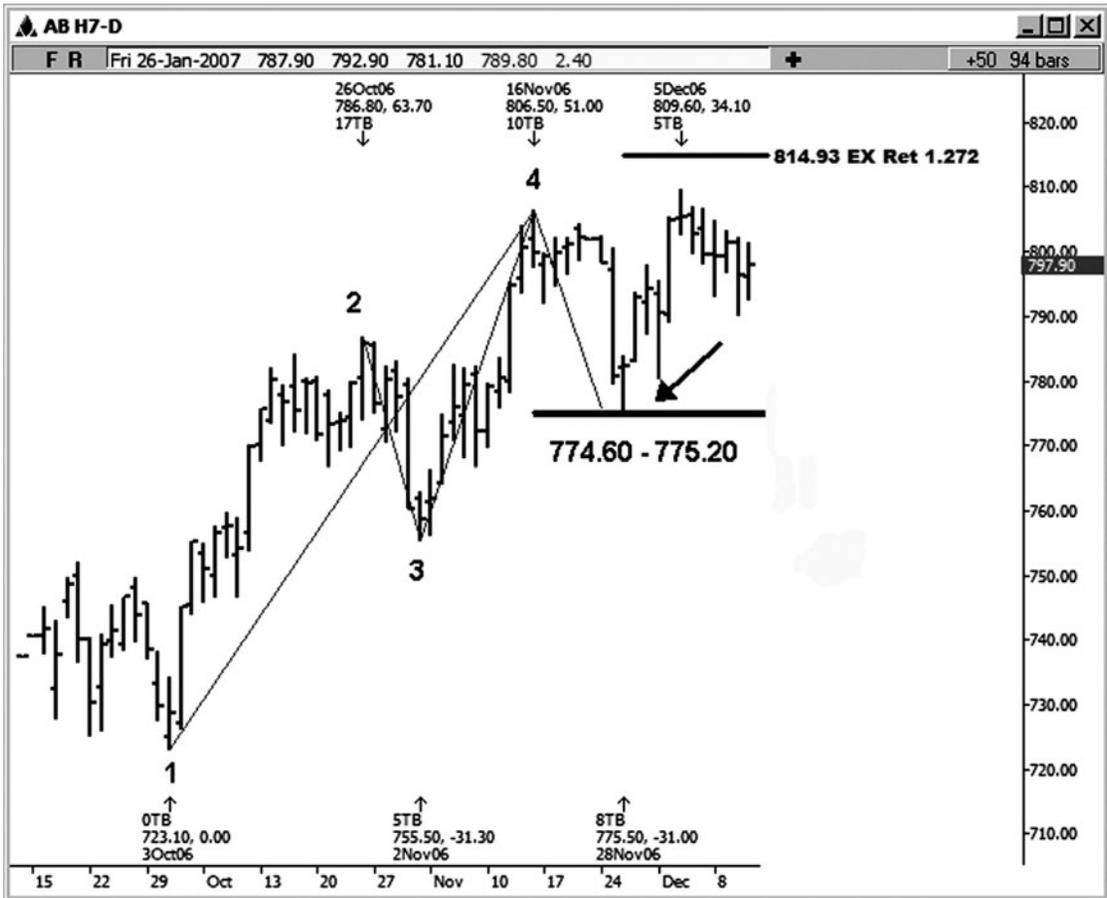


FIGURE 6-14

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.

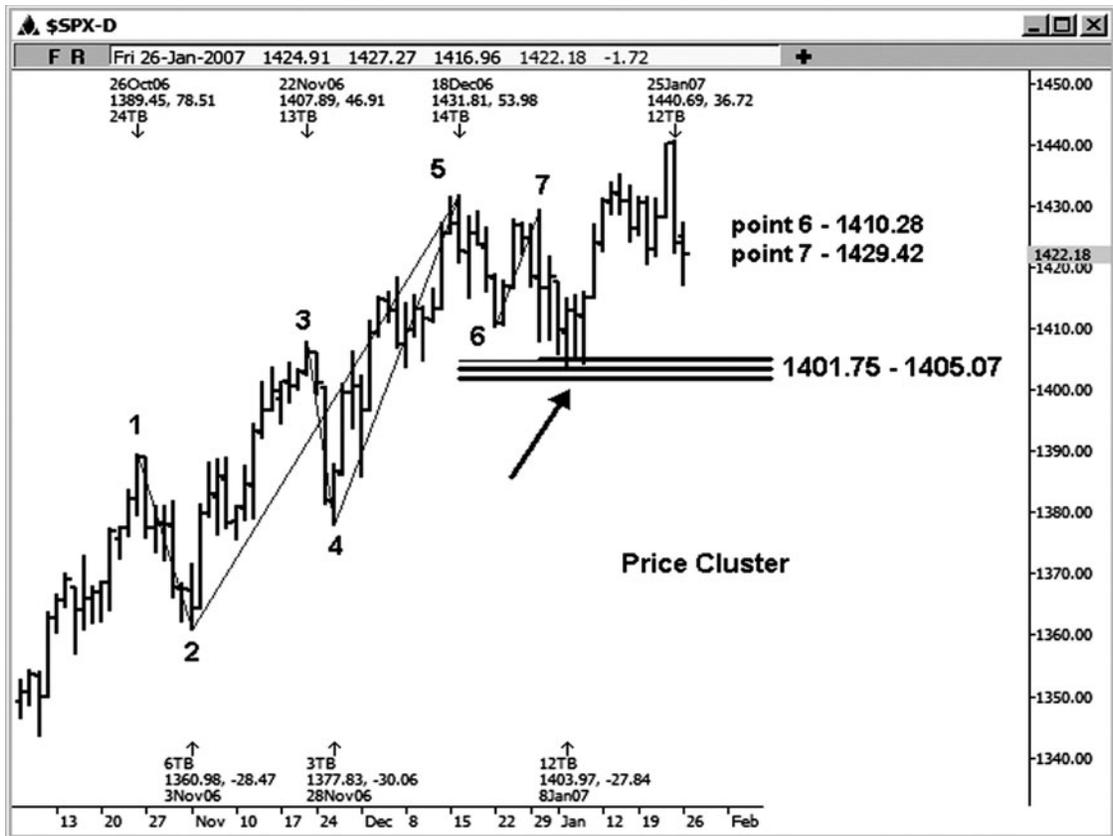


FIGURE 6-15

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.

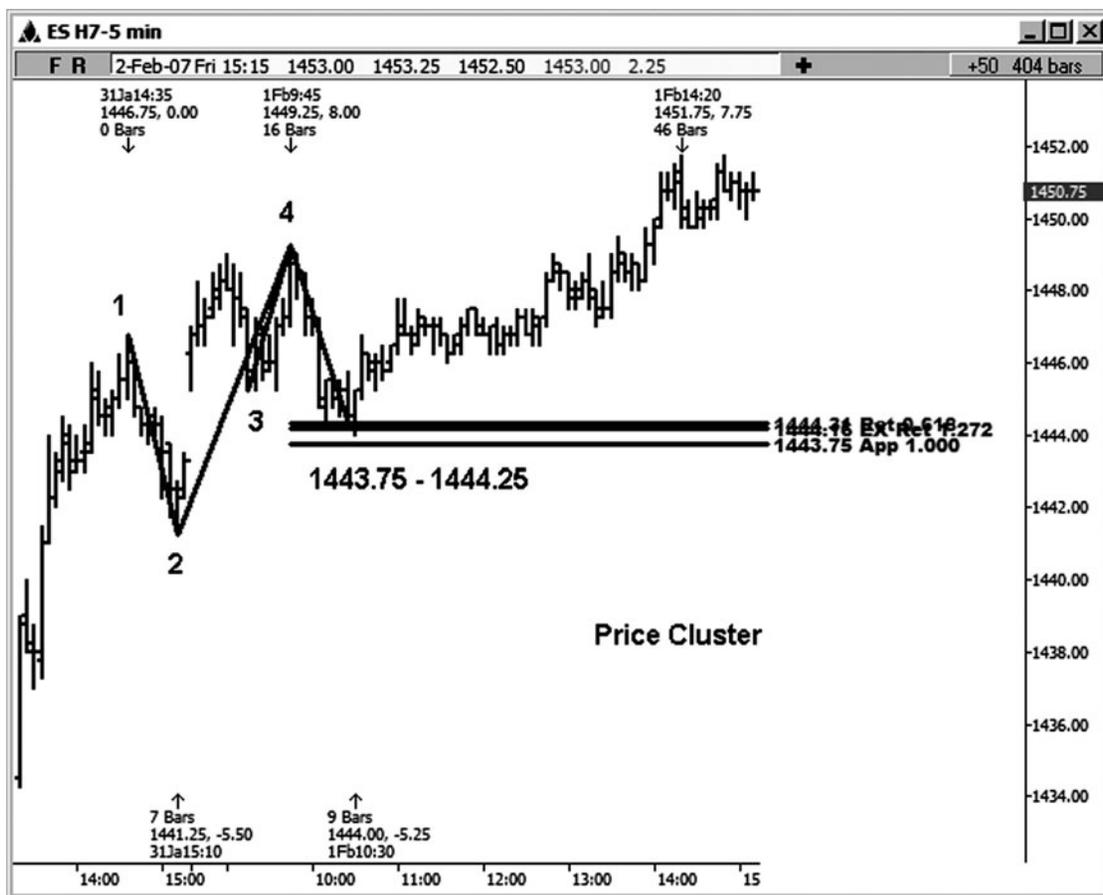


FIGURE 6-16

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.

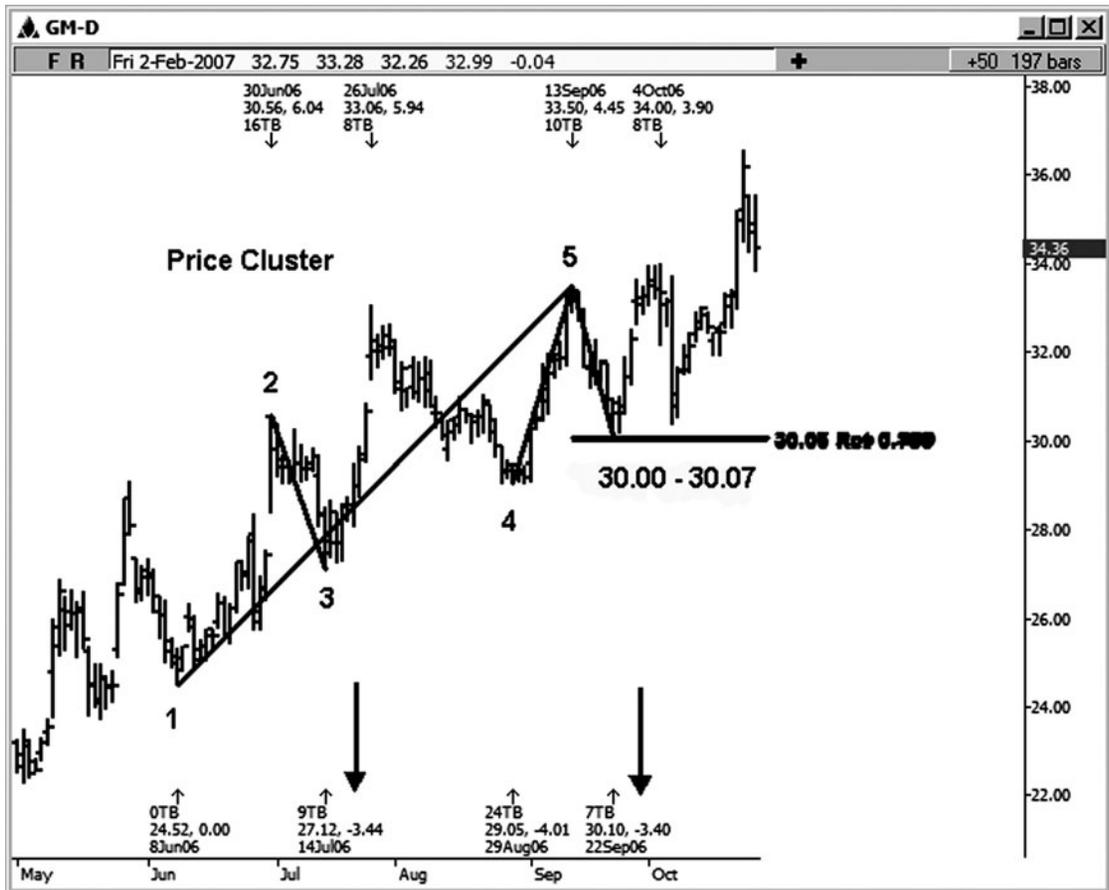


FIGURE 6-17

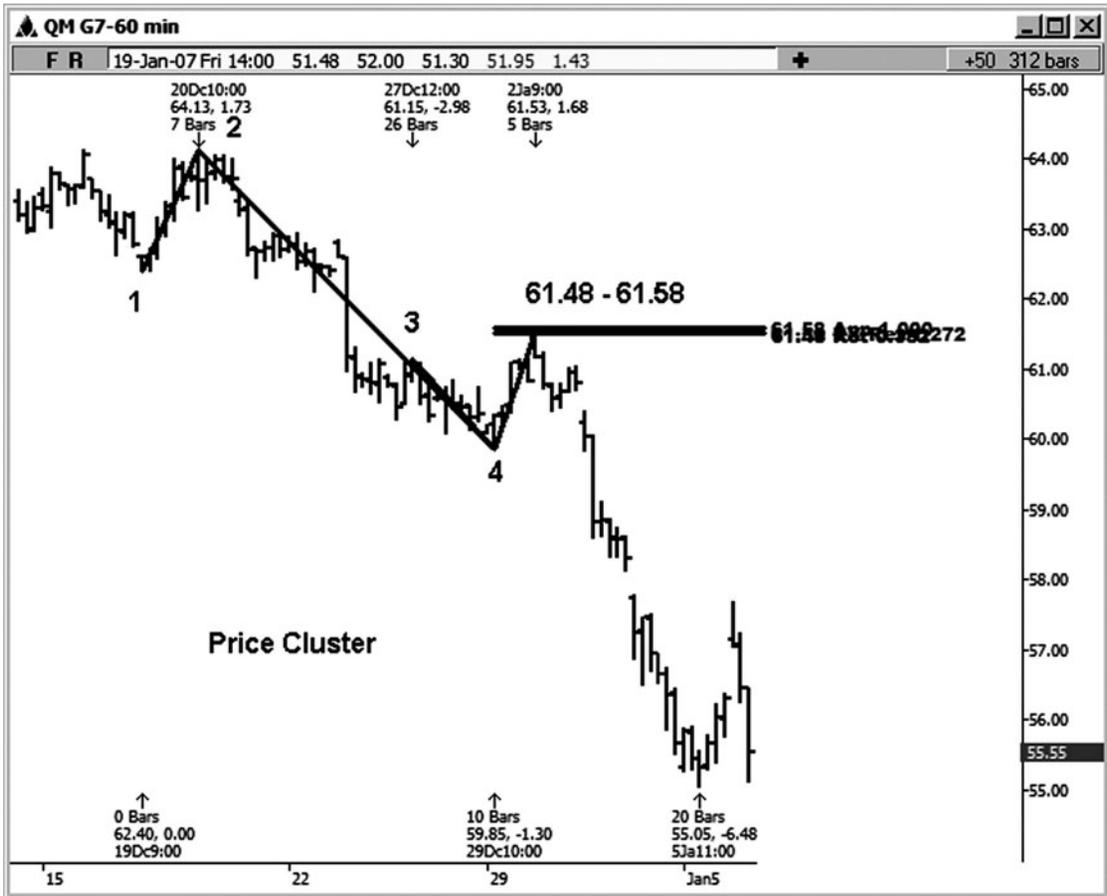


FIGURE 6-18

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.

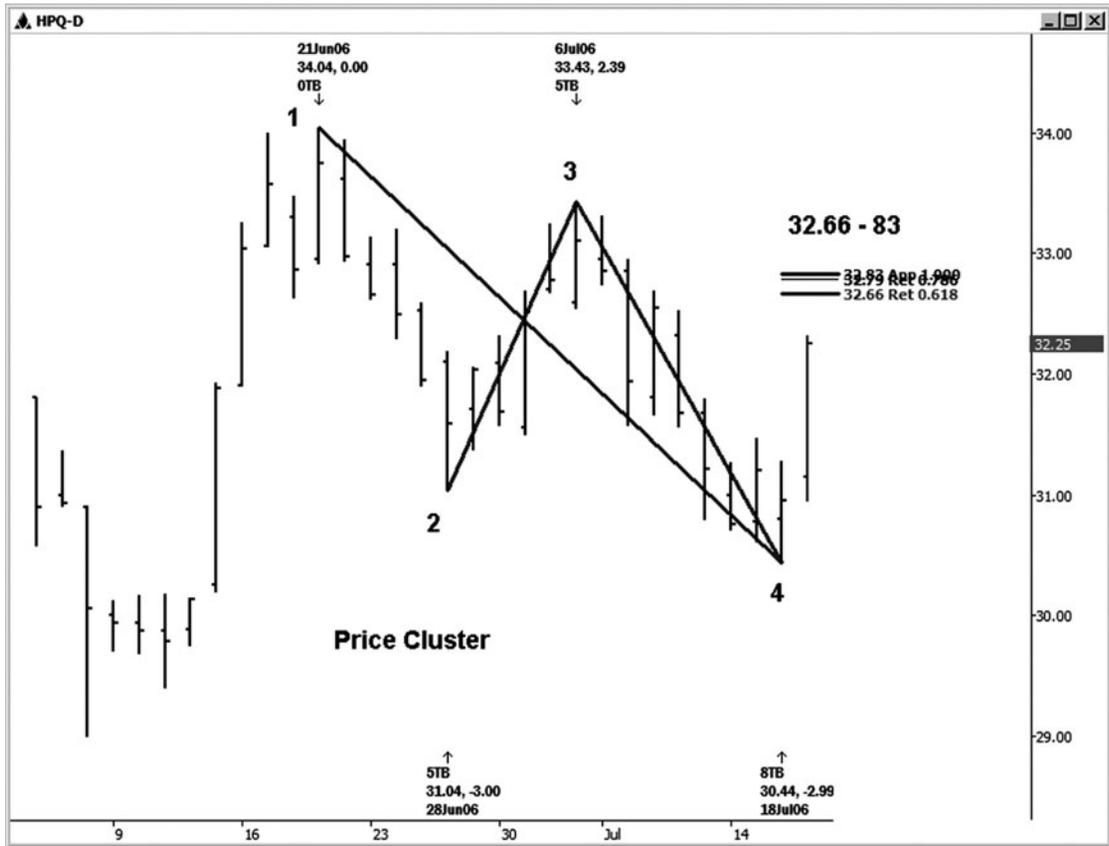


FIGURE 6-19

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.

Notice in Figure 6-22 that there were three corrective declines that were similar or equal (43, 45, and 43 points). When symmetry projections overlap other price relationships, it strengthens the value of the price cluster.

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.

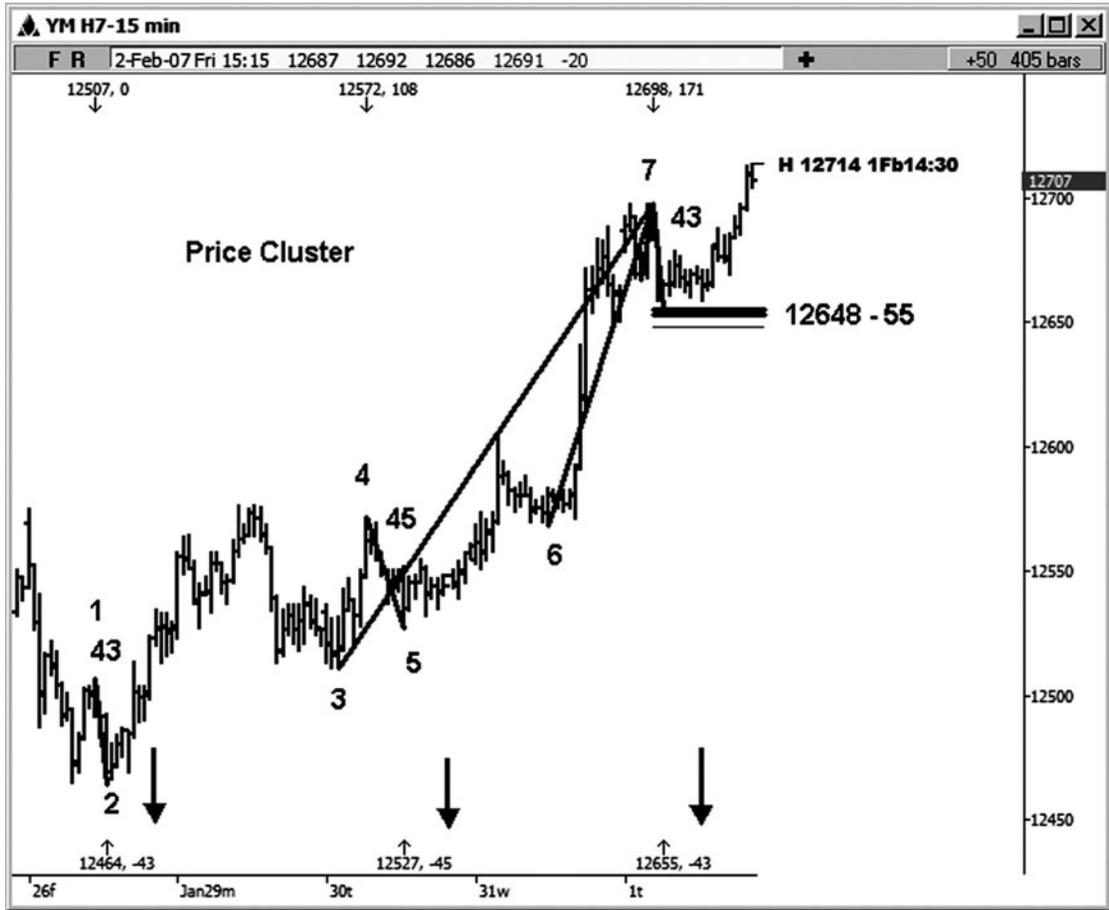


FIGURE 6-22

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.)

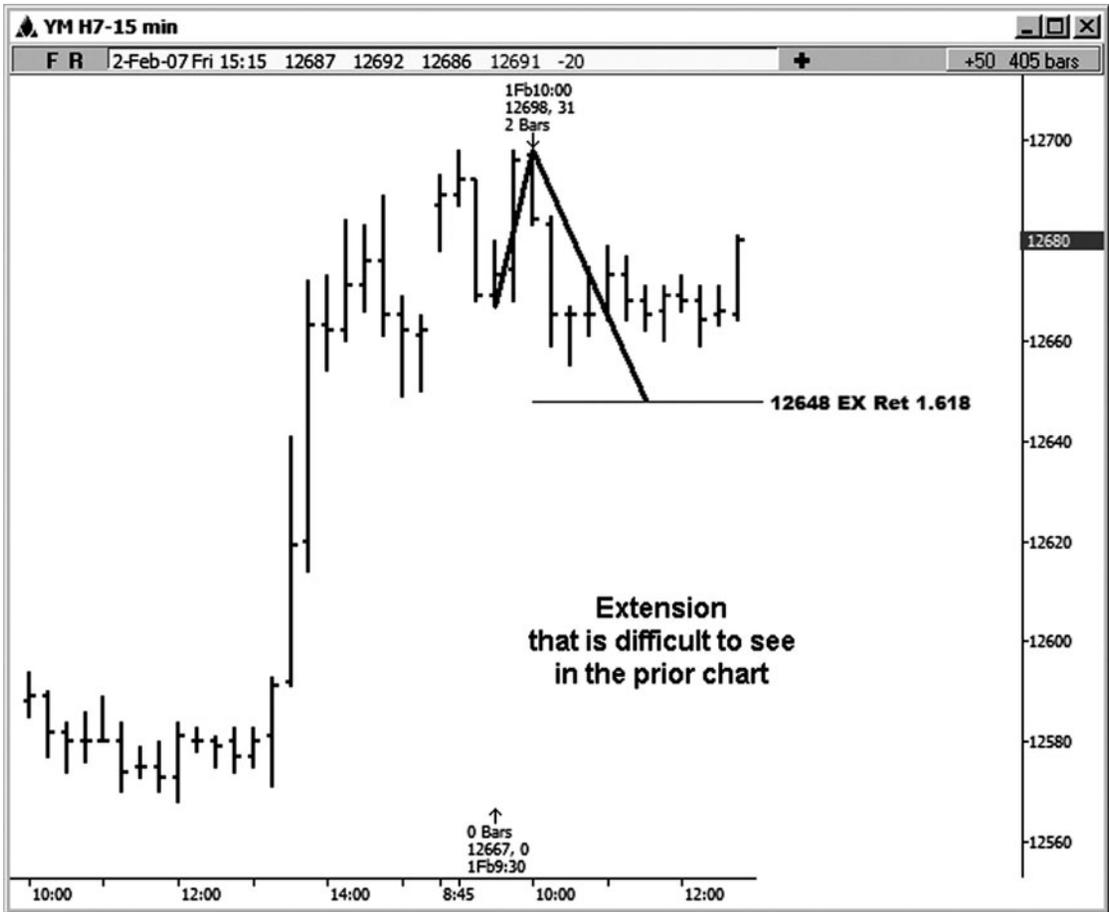


FIGURE 6-23



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

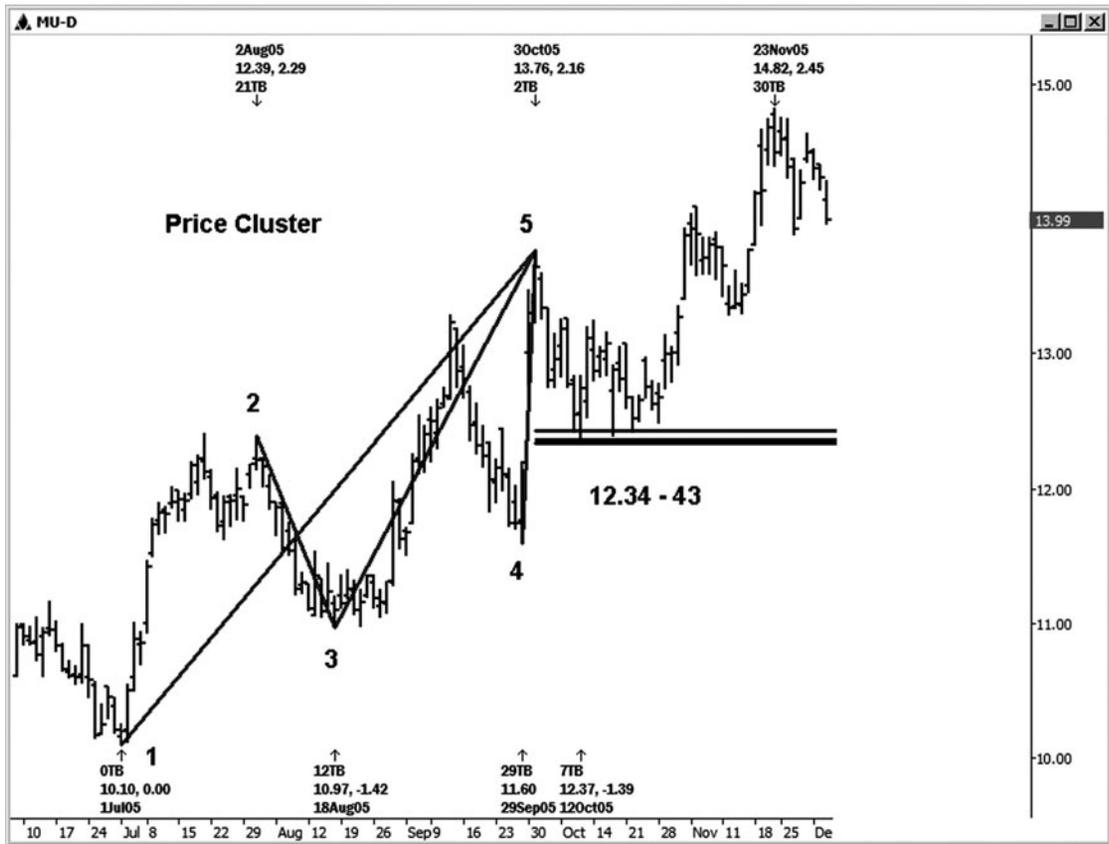


FIGURE 6-26

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

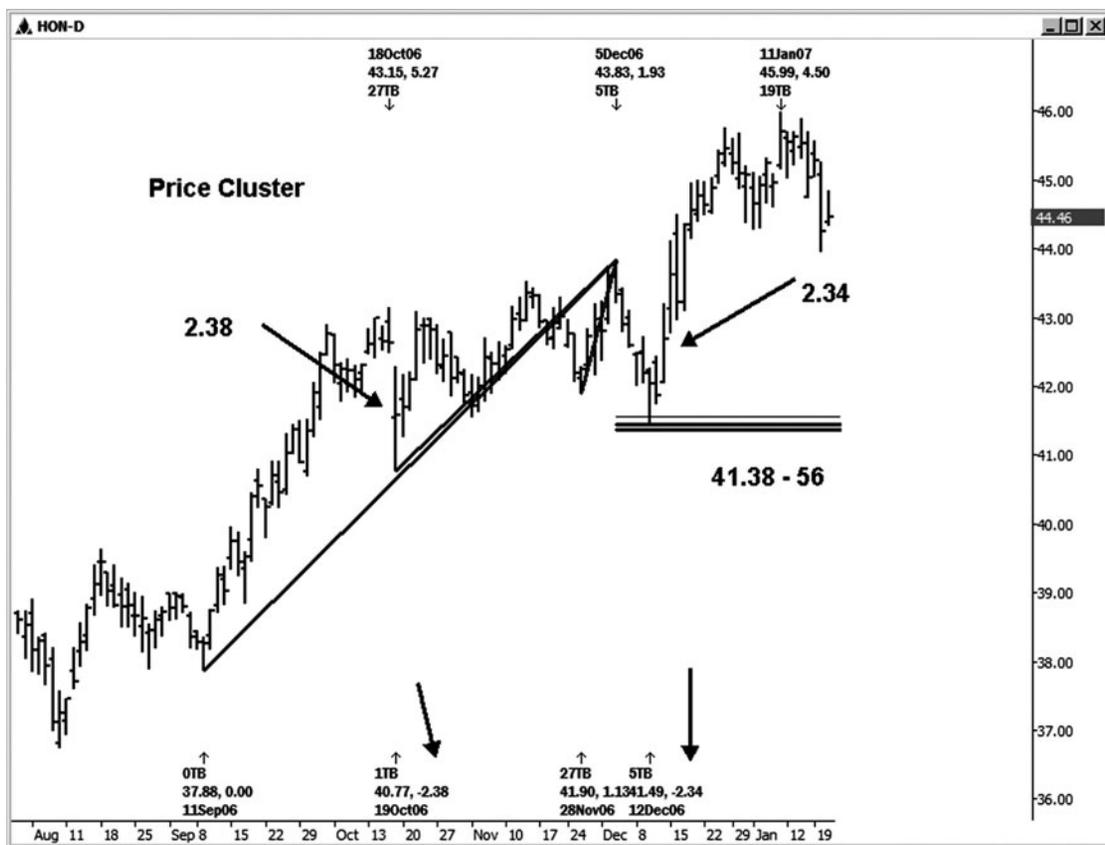


FIGURE 6-27

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

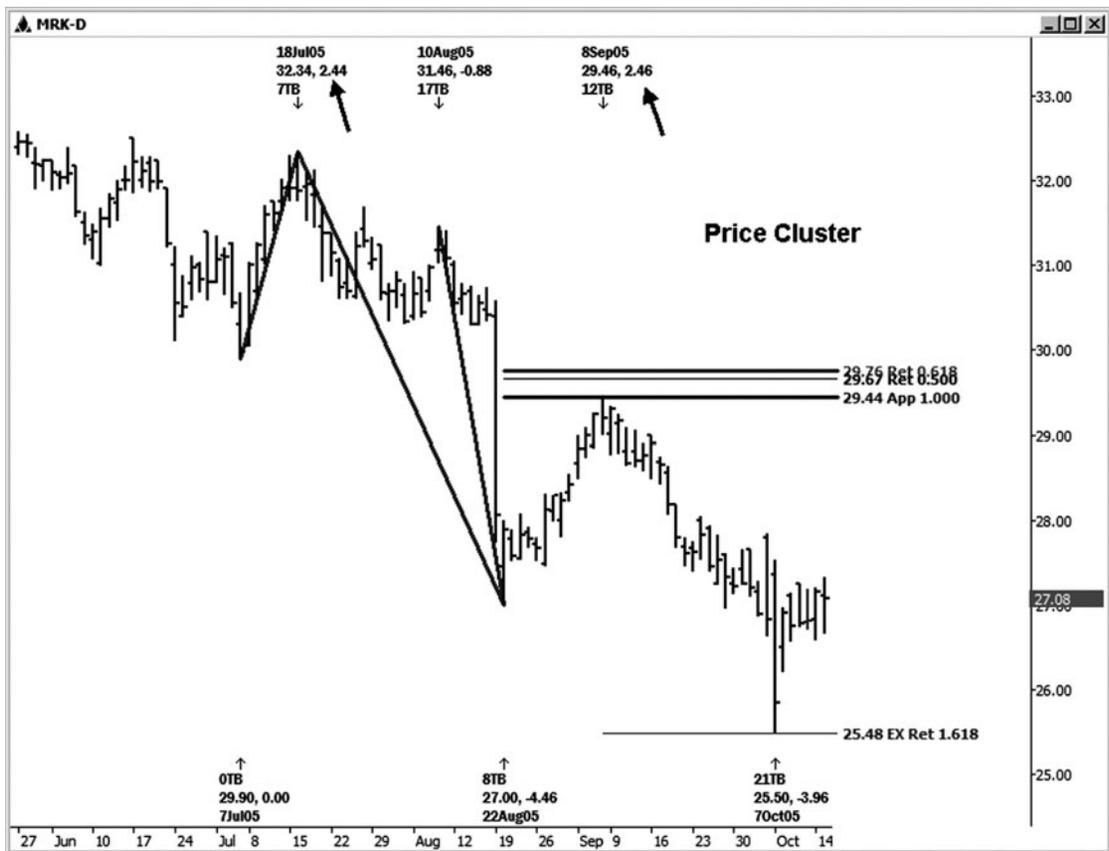


FIGURE 6-28

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

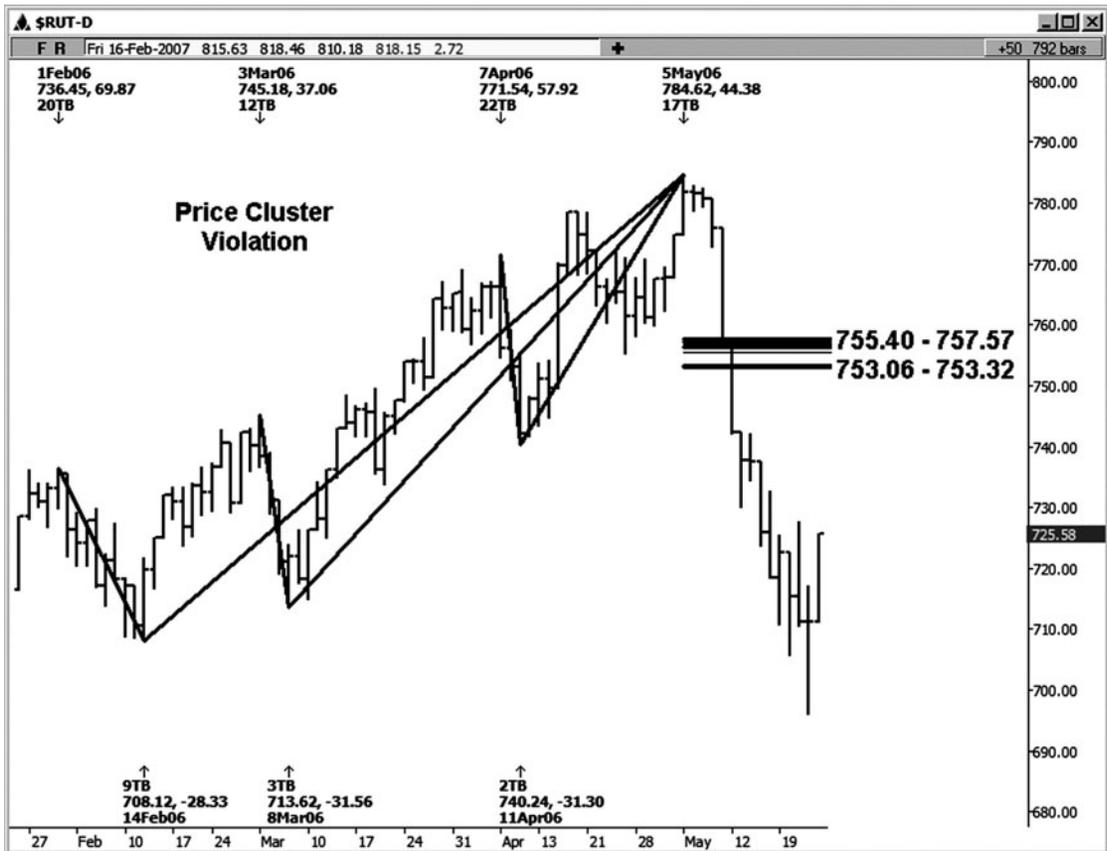


FIGURE 6-30

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.

