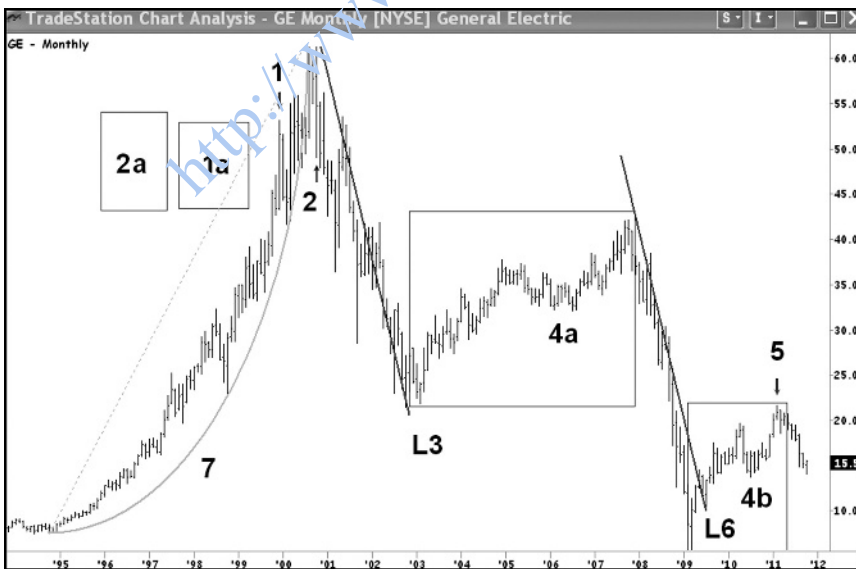


## Geometric Proportion in Market Data

Figure 1.1 helps me continue the discussion about balance and proportion that began in the Introduction. In my experience, the traders who struggle with the Elliott Wave Principle (EWP) do not see critical elements within price data. As example, one of the considerations about the health of a trend is to always be aware of the length of the longest bar in the time horizon of interest. Figure 1.1 is a monthly chart of General Electric. The longest bar in the uptrend is marked by an arrow and the number '1'. However, in a single month a decline developed from the high at '2' that exceeded the length of bar '1'. Some of you will not be able to see this, so use the boxes drawn to the left of the chart. The height of box '1a' is the price range during month '1'. The height of box '2a' is the price range during the declining month marked '2'. The width of the box means nothing, but if I dropped down to a daily chart, how would these two box widths compare? They would be equal provided both months had the same number of days. You will likely continue to study the bars and believe a different bar is longer than '1' as the final rally unfolds. But that is why I used a box as a ruler that is easily moved to new positions for comparison within the chart. The bar marked '1' is indeed the longest within the entire uptrend.

**FIGURE 1.1** GE, monthly



Source: Aerodynamic Investments Inc., © 1996–2012, [www.aeroinvest.com](http://www.aeroinvest.com); TradeStation.

The rally can be described as a parabolic move with a trend at '7' best drawn with an arc. Did you know a parallel channel of the same arc drawn as support can be set as resistance early in the move? It is never a parallel channel as parabolic rallies eventually go perpendicular. Nasdaq in 2000 and this stock both end the stellar rise before the two arcs have a chance to come together into the top. I'll let you try that on your own. As the GE chart is a monthly time frame, you should be able to copy arc '7'.

Consider the line 'L3'. It is drawn from a price high to the bottom of the price low for this declining swing. If I had drawn line 'L6' similarly, it too would connect a swing high to a swing bottom. The slope of 'L6' would have been clearly steeper because less time was required. It should be fairly obvious that the second swing accelerates into the bottom of the chart relative to the distance and time required to create the drop into 'L3'. But look what happens when I duplicate 'L3' and move the copied line over to the top of the counter-trend rally. The secondary pullback that follows the key reversal bottom actually uses this same angle to create a bottom at 'L6'. It is a strong entry signal although the rally that follows is weak. How do I know it is a weak rally that follows? It is a painful upward progression because bars frequently overlap prior bars in the advance. The congestion just above '4b' leads to a rally that is unsustainable as it is fully retraced. The pullbacks throughout the advance are deep relative to the range that ends at point 5. We do not even show volume, but the price action would be significantly less than the decline that tracks through line 'L6'.

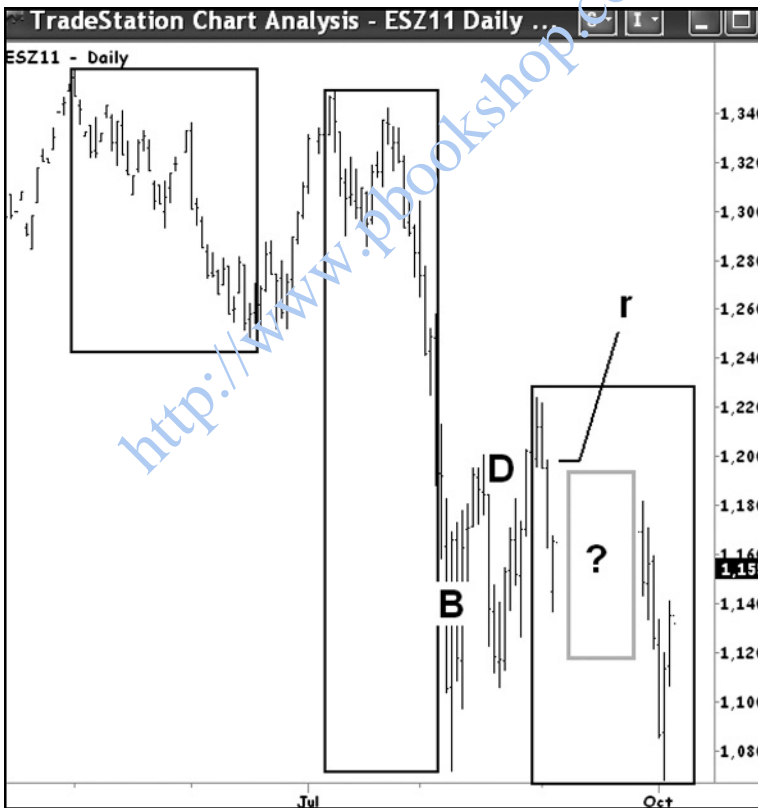
Do you notice that box '4a' and box '4b' have a similar internal structure? The price data does not just move across the diagonal within each box. Both have a short interval when the upward progress is lost to an interim correction. While box '4a' covers more time than box '4b' to develop, the proportions within each box are similar. The interim correction develops about two-thirds into the time interval for each box.

Consider the pullbacks in each box to '4a' and '4b'. Study the space from the '4a' price lows to the top of the box. Then look at the correction lows at '4b' and the space to the top of its own box. Now consider these lows and the space under them to the bottom of each box. They are proportionally very similar. I didn't say exactly the same, but they have the same look and feel. These two swings are trying to mirror one another and that spells trouble for the price high at point '5'.

We have not done any Elliott Wave analysis so far, but your understanding of the internal geometric components is of greater value to you than the work from someone who applies the Elliott Wave analysis incorrectly.

Figure 1.2 is a daily chart of the December 2011 S&P 500 mini futures contract. There are three boxes. The first box on the left is followed by a rally that nearly retraces the entire move down that is contained within the first box. The middle box is clearly a significant market decline. Then a rally follows. The price bars in the area of 'B' show tremendous back-and-fill. Each bar is nearly retraced by the next. The lines connect through the label 'B' and the battle continues into point 'D'. This is a strong indication of market sentiment. The market decline in the middle box shows everyone is on the same side of the market. The people who thought the rally would break to new highs after the first box are caught. The people who sold early want more. The people with longer positions are in trouble when the low of

**FIGURE 1.2** S&P 500 Mini Futures, Daily



Source: Aerodynamic Investments Inc., © 1996–2012, Advanced Trading Seminar, [www.aeroinvest.com](http://www.aeroinvest.com); TradeStation.

the first box is exceeded within the middle. As a result everyone is selling. The key reversal bottom in the middle box would have very high volume. The price data that follows the middle box shows the battle between people believing the decline can resume to new lows versus those trying to bank profits. You also have some who think their fundamentals are aligned to buy. They have not learned you never buy a market that has just bottomed on high volume. So from the market low into point 'D' we see a fairly wild ride as both sides experience a choppy experience. This kind of price action is corrective. It means the final bottom is not in place. After point 'D' there is a drop that is fully retraced. A third box is drawn where the corrective move ends and a decline unfolds to the low just to the right of the middle box. The low should be inside the box, but you would not be able to see it as easily. It takes three swings to define the end of the correction that starts the top of the third box.

In the third box is a middle gray outlined box with a '?' mark. I removed the data. Do you think the missing data is a rally that exceeds the upper boundary of the third box? Could it be a rally that stays within the '?' box? How do you answer this question? Study the four bars that define the left side of the third box. Do these bars spend much time retracing the neighboring bar to the left? None. Is the slope of the decline for these four bars as steep as the slope in the decline within the middle box? Yes. That down force is back in control and the missing data in the '?' box never went higher than the upper boundary of the gray box. The two bars into the top of the third box form a key reversal. From that market high there are three strong bars before I erased the middle bars. You should know there is an old floor saying for identifying a frequent level of natural resistance. It is this: The market often retraces to the start of a third wave. In this scenario consider the bar with a line pointing to it as the point of reference. The 'r' stands for resistance and was in fact the actual start of the decline that falls back to create a double bottom.

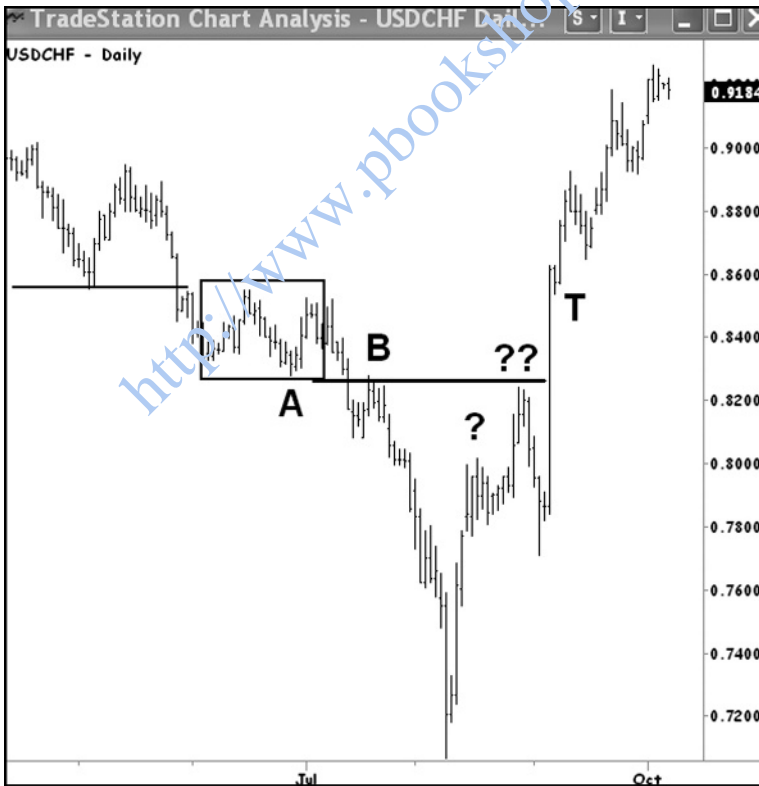
What do you think the volume would be at the price low in the third box compared to the volume that accompanied the first price low under 'B'? It would be less. Oscillators would diverge to further help us define a bottom. We will add indicators after you have begun to study wave structure. But you do not need to see a volume indicator when you understand market psychology. The second decline will be the laggards, the inexperienced, and the weak hands tossing in their positions when they wrongly believed the first bottom was sustainable.

Study the bottom of the first box relative to the top of the third box. Notice the price high into the third box falls just shy of the bottom in the

first box? Good. That relationship is something you must always be aware of as it will define one of our rules.

A spot currency chart is easy to read if you know how to decode it. Figure 1.3 is a daily USDCHF chart. There is no / between the currency references that reverses this order. But USDCHF refers to the U.S. dollar and Swiss franc currencies. To buy one you have to sell the other to pay for it. Therefore the first currency defines the trend. The first half of the chart shows the dollar weakening. Therefore in the first half of the chart the Swiss franc is getting stronger as the chart data declines. Then a major reversal takes place and the dollar strengthens as the Swiss franc becomes weaker. The Swiss franc was pegged to the Euro currency in an effort to weaken the Swiss franc. It is hard to sell cheese, chocolate, and such when your home currency creates a product value that is higher than at what most competitors

**FIGURE 1.3** USDCHF, Daily



Source: TradeStation.

can sell theirs. Great for Hershey's, an American company selling their goodies overseas, but not for a Swiss-made product. So they made a change that caused this immediate move up in the dollar. Will it work and sustain this trend? Unlikely, because you will find government intervention often occurs right at the end of an Elliott Wave pattern. They get a strong reaction and then lose the battle. We will look at this wave count to see why this will fail when we have the skills in place to do so.

We can make a few important observations in Figure 1.3 without knowing Elliott Wave analysis. Notice the price action contained within a box. The price low at 'A' leads to another small rally and fails to reach the top of the small box. The market breaks and defines a small bounce into point 'B'. Here is what you need to really know; the closing prices into the pivot under 'B' never exceed the price low that defined point 'A'. If the market cannot close a bar into the range of the prior swing low, it has failed. Eli Tullis taught me this test and it has served me well over many years. He used to say "the market is no good" when this relationship between swings developed. It was an immediate sell because you knew you were wrong if the market could exceed the CLOSE within the price bar marked 'A'.

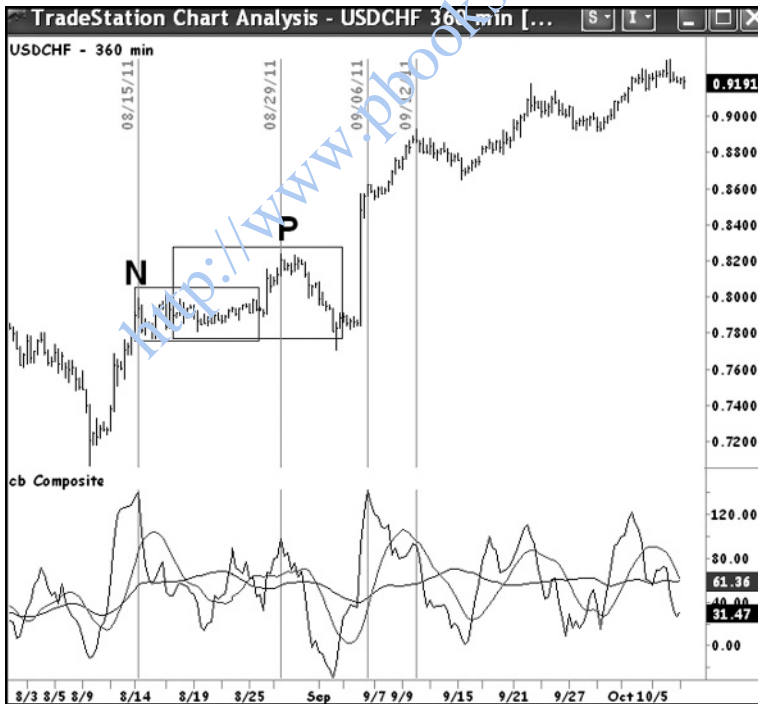
Notice after the hard decline into the low the retracement has the greatest reaction at the same area of resistance. It is marked with a double '??'. My question to you is to recall the exercise you did in the Introduction where you had to connect swings. Off the market low does the first swing up end at the pause marked by one '?', or would you consider the end of the first swing at the high marked by two '??'. The decline that follows retraces all the gains that followed the stall at the single '?'. Now we are starting to see the gray area that is the world of Elliott analysis. A price swing and a price wave are not the same animals. We don't need to answer this one right now. But the answer will come when we study the strongest bar in the rally that follows to the right.

Change your focus to the box above 'A'. Inside box 'A' is that pesky 'N' price action again that fits inside the rectangle. The first move up is a bounce that is counter to the larger downtrend. It is followed by a pretty choppy resumption of the former trend that leads to pivot 'A'. There is a short-lived upward move that chases many early shorts out of their positions. The rally does not exceed the first rebound. You just learned your first Elliott Wave pattern and it happens to be a corrective pattern. It is one of the easiest patterns to recognize. When you see the 'N' price pattern, put a box around it. That's how you can begin to study Elliott Wave patterns on your own. The price waves that create the 'N' are called a *flat*. It is always a *corrective pattern* that will interrupt the larger trend. In rallies, the 'N' pattern is inverted.

Notice the first swing down into a horizontal line on the far left of Figure 1.3. It has a price bottom near the top of the box that follows. None of the highs within the box exceed the price low of the first swing down. Now look to the right and find 'T'. There is a one-bar pause after the strong bar just to the left of 'T'. The rally resumes with a strong move from the same horizontal area as the top of the box. There is a lot of activity in this chart at that same horizontal level. Noticing horizontal levels of activity is something to keep in mind. It will help you later.

Staying with the same USDCHF currency market, turn to Figure 1.4 where a little more detail can be examined within the price data. This is a 360-minute chart and it has a few more price bars within a period of time than we would see in the daily chart. Currencies trade around the clock so there is always a question with spot Forex markets where to end the day. I solve the problem with a 360-minute chart. I have added my custom

**FIGURE 1.4** USDCHF, 360-Minute



Source: Aerodynamic Investments Inc., © 1996–2012, Daily Market Report, [www.aeroinvest.com](http://www.aeroinvest.com); TradeStation.

oscillator called the Composite Index. It is an oscillator that warns when RSI is failing to detect a trend reversal. The formula and full description can be found in my book, *Technical Analysis for the Trading Professional*, Second Edition. A fast summary is the Composite Index has momentum imbedded within the RSI formula using a short period. A normalized oscillator that is forced to travel between zero and 100 is changed to allow it to swing freely. As a result, it can help answer questions like the one referenced a short time ago. Where would you end the first swing if you are on a mission to subdivide the rally that develops in Figure 1.4? Does the first swing end at point 'N' or does it end at point 'P'?

I would end the first swing at point 'P' because that is where the oscillator diverges. I also know moves never end where the Composite Index makes a new oscillator extreme. That said, the swing ends at point 'P' but the Elliott Wave count might end the first wave up at point 'N'. That is why you cannot assume price swings and wave structure are one and the same. Do not worry, since I have a game plan to handle this common topic of confusion.

We are going to spend a lot of time using oscillators as well to help build wave interpretations. But while you are on Figure 1.4, notice the oscillator high on 9/6/2011 is the same displacement as seen at point 'N' on 8/15/2011. Then the diverging pivot on 9/12/2011 is at the same displacement as the one that accompanied the price high at point 'P' when you compare the oscillator peaks on a horizontal axis. The oscillator is going to be of tremendous help to take away some of the guesswork that occurs when price data alone are used.

When I had a partner in Kuwait who was an options trader, his skills were entirely left-brained and he struggled to see geometry and wave structure applied to financial market data. Because of his difficulties I began to draw boxes since it solved language issues as well. He knew how many boxes were needed and I found it easy to draw boxes to represent future movement. It worked and we found common ground. (Left-brained is said to be our number crunching and fundamental side. The right brain is where we process 3-D images, geometry, art, whether a picture is hung straight, and so on.)

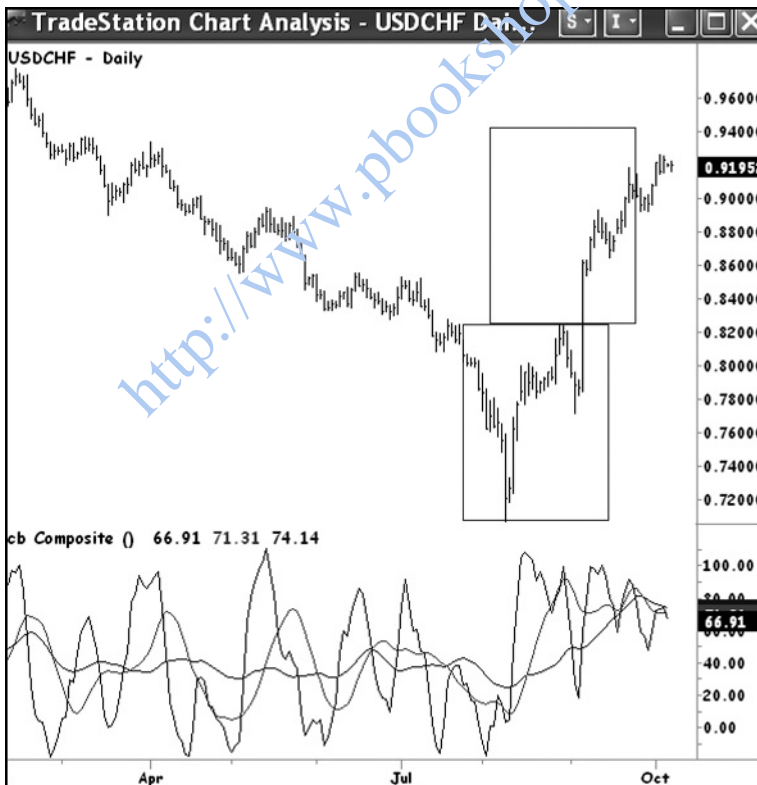
I began to use boxes to teach the Elliott Wave Principle and discovered that people loved the boxes! It made it so much easier for them. The more boxes I drew, the more I found we could apply the EWP to extrapolate a fast target using simple concepts. The best part is you do not need to know any Elliott patterns to begin to use this method.

You likely know already that trending markets move in patterns of five waves. If not, we will begin to look at this in Chapter 2. The third wave is most often the strongest part of a move because that is when everyone in the

market clues in to what is happening at the same time. The people on the wrong side of the market have to cover, the people early want more, and the people left out on the side have to jump in. So everyone is on the same side. Knowing the strongest wave *is often the middle of the move* allows us to apply this knowledge in the following way.

Figure 1.5 returns to the daily chart for the USDCHF market. The chart contains two boxes. I have drawn the lower box from the price low to the pivot we called point 'P' in Figure 1.4. I then used the feature in TradeStation by using the right mouse button on the box to select 'New Parallel'. Any time you use this option it just duplicates the object. If you use different software, maybe you have the option to copy and paste. You get the idea—the second box must be an exact copy of the first. I then move the second box to the top of the first. I know, Fibonacci extensions would

**FIGURE 1.5** USDCHF, Daily



Source: Aerodynamic Investments Inc., © 1996–2012, www.aeroinvest.com; TradeStation.

tell you to move the second box to the low of the swing that follows 'P'. Forget it. We are doing something very different. Just put one box on top of the other. Why? The very strong bar that tracks inside both boxes is a third wave. It is the middle. Therefore I know it is half the move. The market is not quite to the top of the second box. That's good. The wave structure inside the second box is not complete. If you do not know it is incomplete, and you would not since we have not begun to discuss Elliott, we can use the market to confirm that we are making a logical projection this market will likely respect (see Figure 1.6).

Now we are going to pretend this market has already produced another move up that reaches the top of the second box. Subdivide the entire range created from the two boxes using a Fibonacci tool. The 50 percent subdivision should

**FIGURE 1.6** USDCHF, Daily



Source: Aerodynamic Investments Inc., © 1996–2012, [www.aeroinvest.com](http://www.aeroinvest.com); TradeStation.