CHAPTER 10

PATTERN RECOGNITION

Pattern recognition refers to the process by which we recognize recurring events. Typically such events have a signature consisting of a number of discrete pieces that, when combined in specific sequences, allow us to recognize the pattern and act upon it. These patterns rarely, if ever, repeat exactly. Rather, they are only generally the same, and there lies the rub. In order to be successful at pattern recognition, we need some framework within which these patterns can be analyzed, and Bollinger Bands can provide that framework.

The literature of technical analysis is rife with descriptions of technical patterns. Double bottoms and tops, head-and-shoulders formations (regular and inverted), and ascending and descending triangles are but a few of the more common patterns. Some patterns imply trend reversals, and others are continuation patterns.[1]

Bollinger Bands can aid in pattern recognition by providing definitions: high and low, calm or volatile, trending or not—definitions that can be compared from time to time, from issue to issue, and from market to market. As the patterns evolve, the bands evolve right along with them, providing a relative, flexible framework rather than the absolute, rigid framework imposed by the grid of a chart or the hardness of a trend line.

Securities rarely transition from bullish phases to bearish phases or vice versa in an abrupt manner. The transitions usually involve a sequence of price action that typically includes one or more tests of support or resistance. Ms and Ws are examples of patterns that form at turning points in the markets and let us know that the prior trend has ended and a new trend has started. That new trend can be a reversal of a prior uptrend or downtrend, a transition from a trendless state, or it could be the beginning of a sideways trend such as a consolidation. Most common are double bottoms and head-and-shoulders tops. But not all reversal patterns are W bottoms or extended M tops characterized by three "pushes"; they are merely the most common (Figures 10.1 and 10.2).

Spike tops and V bottoms can and do occur, marking virtually instantaneous transitions from up to down or vice versa. Some reversal patterns don't turn out to be reversal patterns at all; they simply mark the end of the prior trend and a transition to a sideways market, rather than the beginning of a new trend in the opposite direction. Then there are longer, more complex patterns too: gradual transitions from downtrends to uptrends known as bases, congestion patterns, and complex tops.

Often patterns are small parts of larger patterns that can be seen only on a longer scale, say, by shifting from an hourly view to a daily view, or from a weekly view to a monthly view. There was a trading system[2] created in the late 1980s that used three time frames and required that the patterns or signals be similar in all three time frames before a trade was taken. This was a "fractal"[3] approach to the markets and one of the most eloquent demonstrations of the importance of overlapping time frames ever presented.

It turns out that fractal patterns are very common. For example, take a long-term W bottom. When examined closely, the W may turn out to have intermediate-term W bottoms

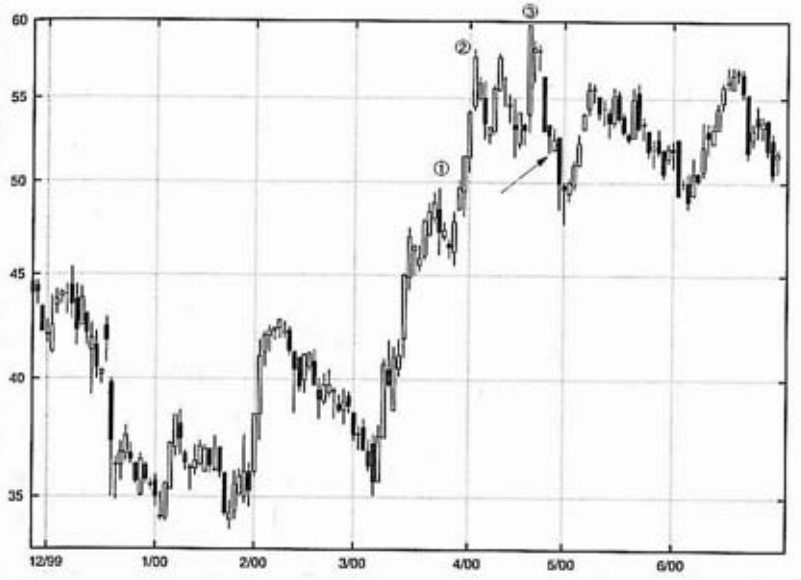

Figure 10.1 Three pushes to a high, Pharmacia, 150 days. Three pushes to a high followed by sharp downside action that breaks the trend.

Figure 10.2 W bottom, Bear Sterns, 100 days. Classic W bottom—note the positive candlesticks right after the lows.

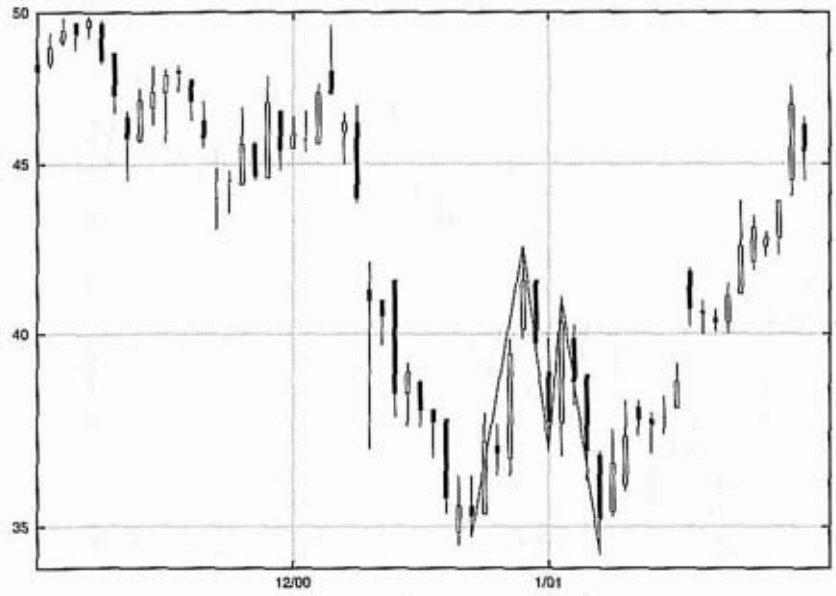

Figure 10.3 M within a W, Harley Davidson, 100 days. Can you see the M within the W?

embedded in its footings; and often you'll see a small M formation appear at the apex of the W (Figure 10.3). There is really no limit to this fractal quality, though more than two or three levels are rarely observed at work concurrently.

Regardless of the level of magnification, technical patterns refer to a sequence of price action that forms a typical pattern on the chart with a recognizable signature—a pattern and signature that can be elucidated with Bollinger Bands. To wit:

An ideal example of a W (a double bottom) involves an initial decline followed by a recovery rally, and then a secondary decline followed in turn by the initiation of an uptrend. It isn't important whether the second decline makes a new low or not—at least in absolute terms. The first low will be outside the lower Bollinger Band, while the second low will fall inside it. Volume will be higher on the first decline than on the second (Figure 10.4).

A similar top is not necessarily a perfect mirror of the bottom's pattern; the top will likely take more time and consist of three (or more) upward thrusts to complete the pattern rather than just

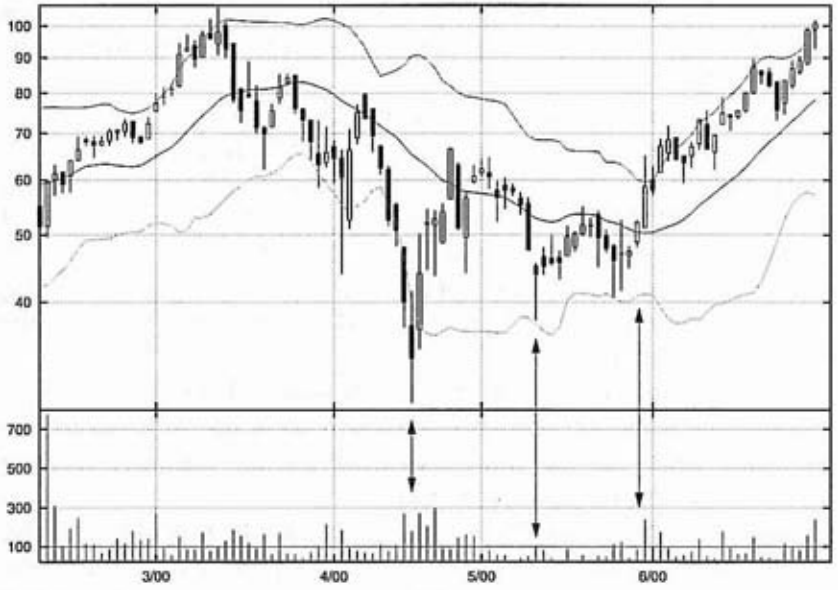

Figure 10.4 W bottom, Bollinger Bands, and volume confirmation, Art Technology Group, 100 days. Strong volume on the first low, weak volume on the second low, and strong volume on the liftoff.

two. Such a top will likely be a variation on the head-and-shoulders pattern.

Bollinger Bands can dramatically clarify the patterns you see on the charts. An ideal W is a momentum low that occurs outside the lower Bollinger Band, followed by a price low inside the lower band. Even if the final price low has driven to a new absolute low, *it is not a new low on a relative basis.* Therefore the ensuing rally can be acted upon without the emotion usually coincident with a new low in price.

To help categorize these patterns, you should think of momentum highs and lows followed by price highs and lows. Typically in a decline you'll get an accelerated move into the first low; this is where the momentum is the highest, a fact that is usually confirmed by very high volume. Then will come a period of recovery followed by a decline that will establish the price low, which may well be a new low in price but which will occur with greatly reduced momentum and volume. In many cases the

momentum peaks and troughs will occur outside the Bollinger Bands and the subsequent price peaks and troughs will occur inside the Bollinger Bands.

Another way of thinking about tops and bottoms is as processes that consume momentum. So in addition to the volume indicators that we favor in this book, momentum indicators can be very useful in the diagnostic process. A useful analytical approach is to plot both a volume indicator and a momentum indicator (Figure 10.5). Each operates independently of the other, so when they signal together, they afford a high level of confidence in the outlook for the stock.

Although one of the most important uses of Bollinger Bands is in diagnosing tops and bottoms, there are other important pattern-recognition uses: identifying continuing trends, defining trading ranges, and recognizing The Squeeze.

Pattern recognition is the key to successful technical investing. And Bollinger Bands, especially when coupled with indicators, are the key to successful pattern recognition. The next chapter

Figure 10.5 W bottom, Bollinger Bands, volume indicator, and momentum indicator, Art Technology Group, 100 days. Less downside momentum and less volume on the retest.

presents a method of categorizing patterns that will stand you in good stead in all market conditions.

KEY POINTS TO REMEMBER

- Ms and Ws are the most common patterns.
- Patterns are often fractal.
- Bollinger Bands can be used to clarify patterns.
- Lows (highs) outside the bands followed by lows (highs) inside the bands are typically reversal patterns even if a new absolute low or high is made.
- Volume and momentum indicators are very useful for diagnosing tops and bottoms.

CHAPTER 11

FIVE-POINT PATTERNS

Virtually all stock-price patterns can be neatly classified with the aid of a simple tool, the price filter. This approach connects high and low points on a chart where the swings between the points exceed a certain number of points or, more usefully, a certain percentage.

A useful point filter might be as large as 100 points for the Dow Jones Industrial Average, or as small as 2 points for IBM. As the price levels change, these fixed-point amounts represent different percentage values. It is generally better to employ a percentage filter that has the same economic value at all price levels. Certainly for stocks, point filters really aren't worth considering.[1] An 8 percent filter would amount to $^{8}/_{10}$ of a point at 10, but 8 points at 100, whereas an 8-point filter would be 8 percent at 100 and 80 percent at 10. These results are highly variable due to the wide

range of prices at which stocks trade, thus point filters are not comparable from issue to issue.

Percentage filters between 2 and 10 percent usually work well for stocks and offer comparability from issue to issue. Figures 11.1 through 11.6 illustrate the percentage filter in action. Each chart depicts the same series, but employs a successively higher percentage price filter. The resulting zigzag lines eliminate an ever-greater amount of noise, until we reach the final example—Figure 11.6—where the entire chart is characterized by a single swing. The goal of these swing charts is to filter price sufficiently to clarify the patterns without eliminating important information.

Another filtering method similar to zigzags or swing charts is point and figure. Point-and-figure charts, which may be the oldest Western stock charting method, are based purely on price swings, which are recorded without reference to time or volume. Point-and-figure charts are kept on square-ruled graph paper, and each individual portion of the grid is referred to as a box. Price levels are marked at the left, on the y axis.

Point-and-figure charts appear in the literature as early as the late 1800s, with references to "figure charts" being kept on the

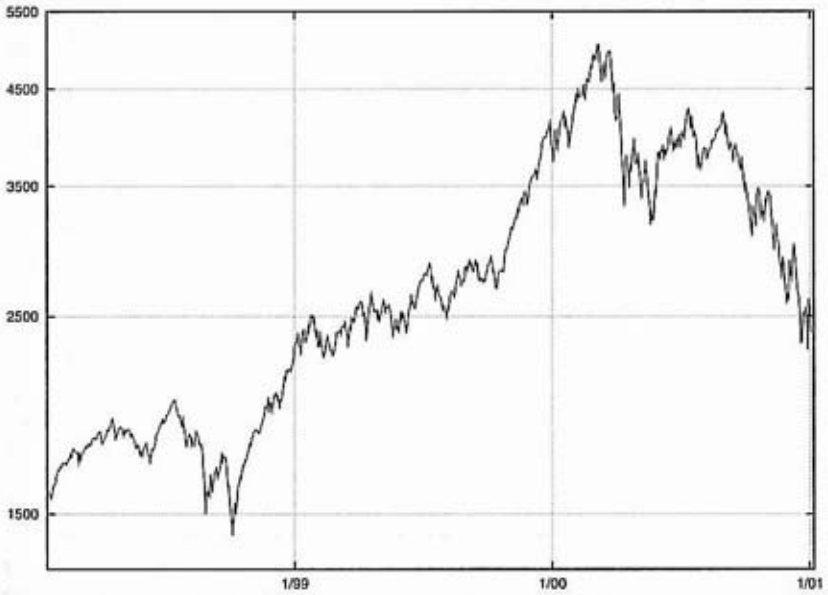

Figure 11.1 NASDAQ Composite, three years, no filter. The raw data.

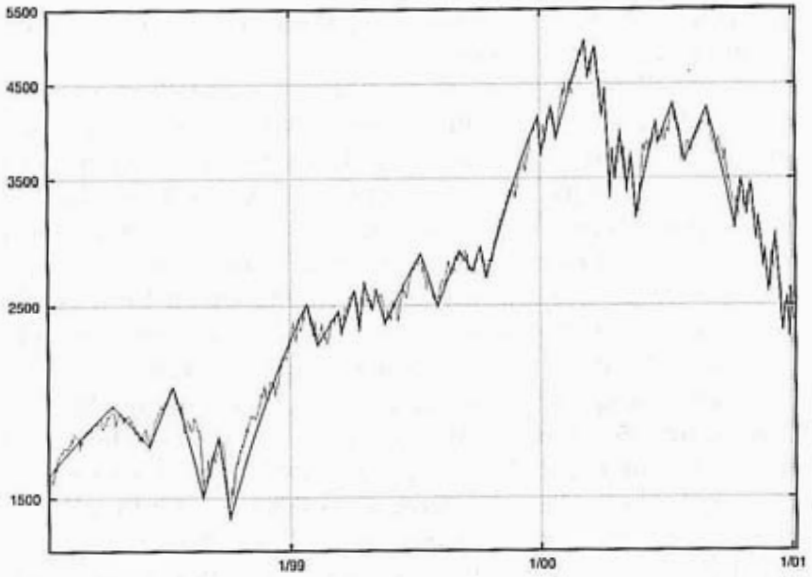

Figure 11.2 NASDAQ Composite, three years, 5 percent filter. The filter starts to clean things up.

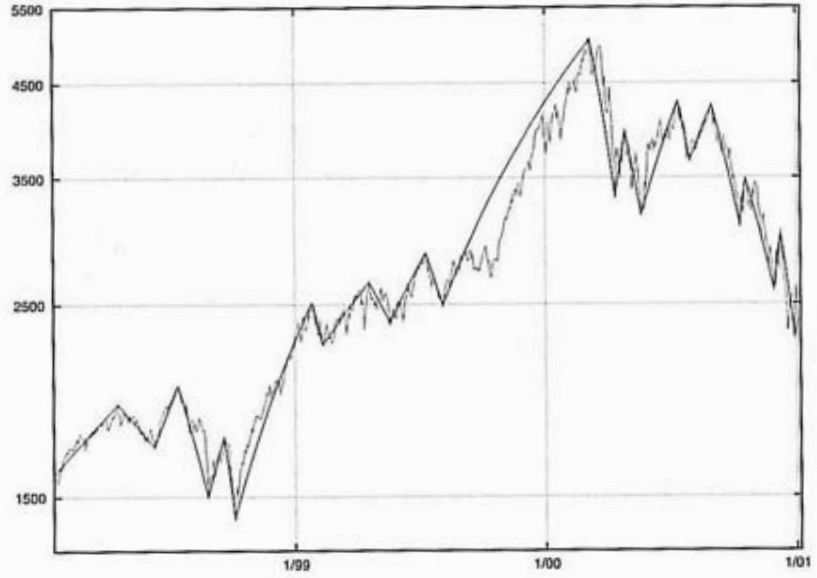

Figure 11.3 NASDAQ Composite, three years, 10 percent filter. Shows a pretty good picture of the important swings.

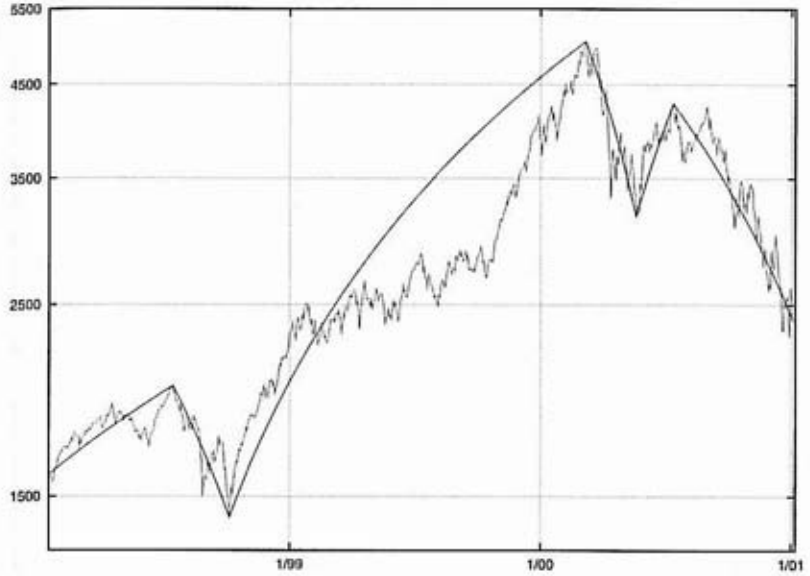

Figure 11.4 NASDAQ Composite, three years, 20 percent filter. Too filtered—important detail is being lost.

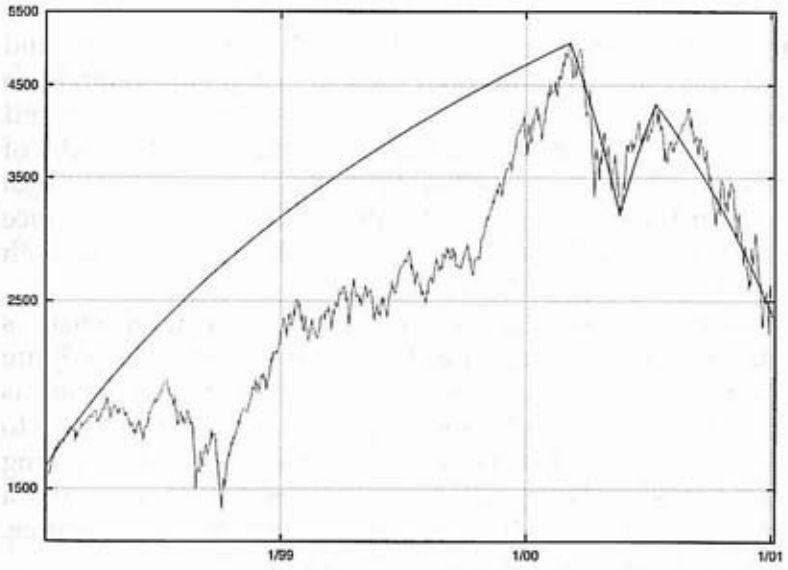

Figure 11.5 NASDAQ Composite, three years, 30 percent filter. Shows just the really big picture. (Filter lines curved due to log scaling.)

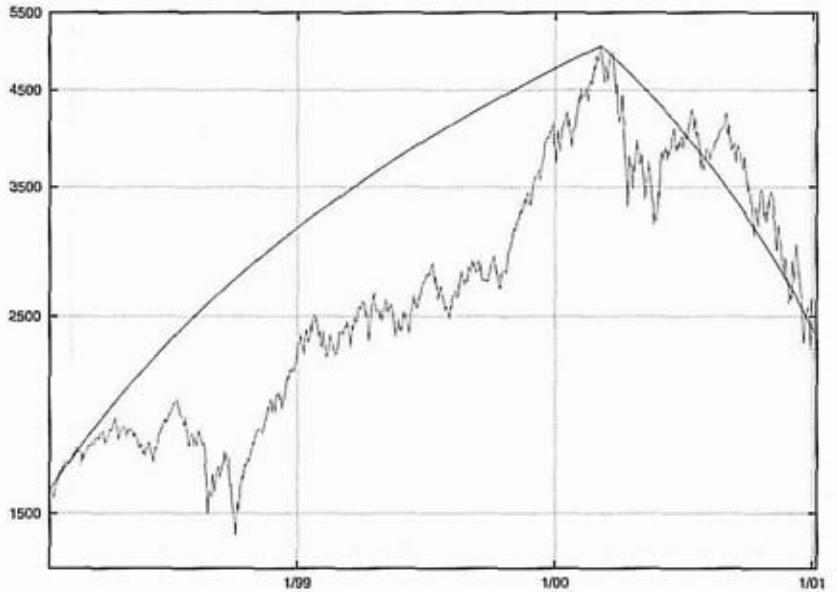

Figure 11.6 NASDAQ Composite, three years, 40 percent filter. This is way too filtered; no signal left.

exchange floor. Today they are marked with Xs for upswings and Os for downswings. The original "figure" charts are thought to have used the actual figures—3, 21, 57, etc.—in the boxes to record price action. Floor traders wrote them by hand on the backs of trade tickets. Then came point-and-figure charts composed with Xs plotted in both directions, but with 0s and 5s when the price ended in 0 or 5; deVilliers and Wheelan, published analysts, both used this method (Figure 11.7).

The modern process of keeping a point-and-figure chart is fairly simple, and the charts can be kept easily by hand (Figure 11.8). Xs are placed successively higher in a column of boxes as price rises; then as price falls, Os are placed in the next column to the right. The transition from a rising column of Xs to a falling column of Os is triggered by a reversal that exceeds a predetermined limit, usually a number of boxes, most often three. The opposite is true for a transition from Os to Xs.

Point-and-figure practitioners have long faced the problem of selecting an appropriate filter or box value. They generally use a rule based on the price of the stock. At low price levels each box

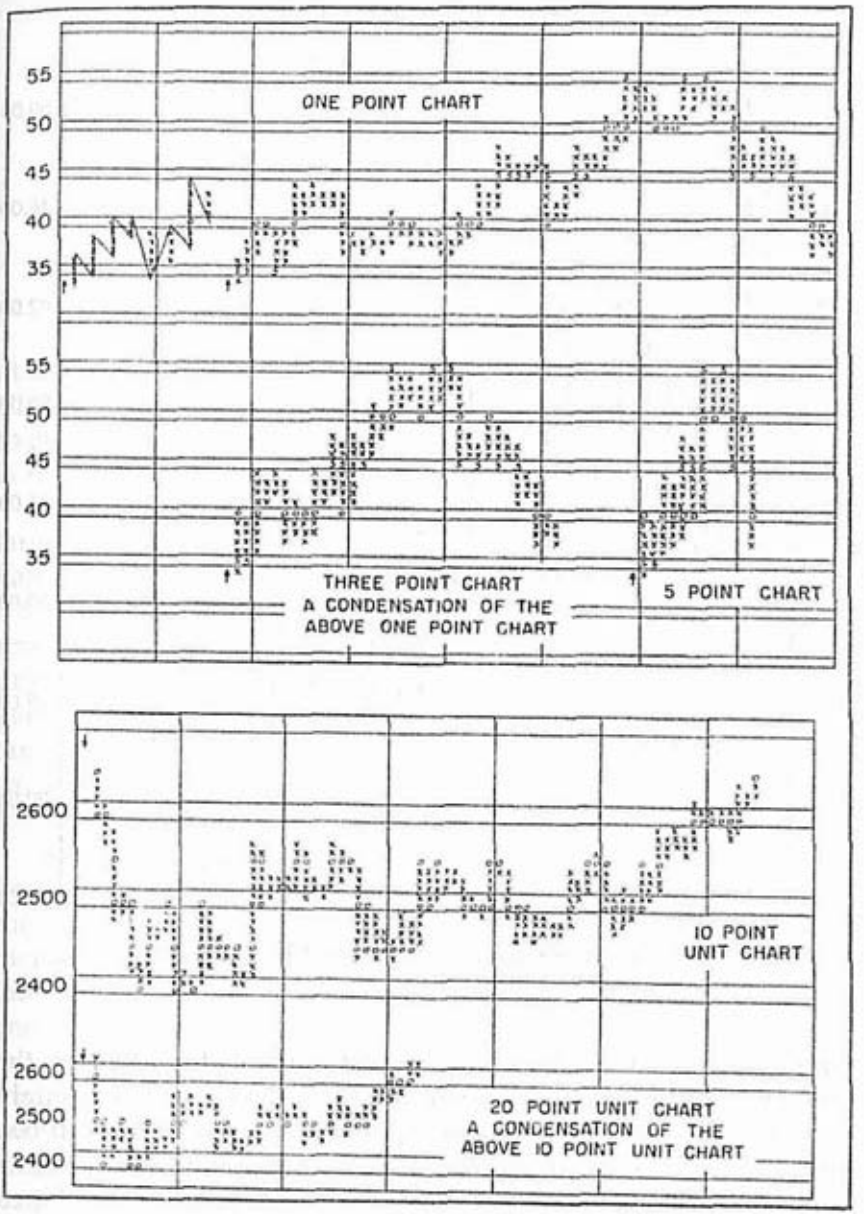

Figure 11.7 Point-and-figure chart from Wheelan. [SOURCE: *Study Helps in Point and Figure Technique* by Alexander H. Wheelan, originally published by Morgan, Rogers, and Roberts (New York, 1947), reprinted by Fraser Publishing (Burlington, Vt., 1989).]

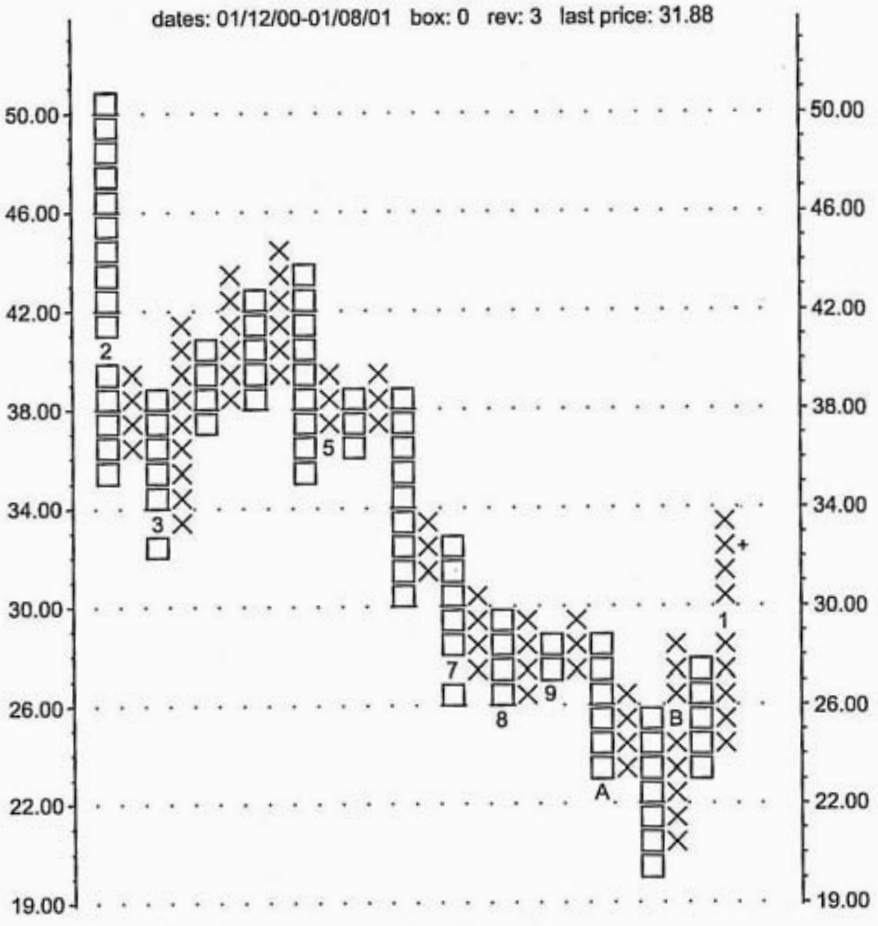

Figure 11.8 Modern point-and-figure chart, IBM, one year.

might represent a quarter point or a half point. At higher prices the box size is increased so that each square on the grid, or box, might now denote a half point or a full point. For a $10 stock each box might be a point, or for an $80 stock each box might represent a point and a half. The ChartCraft approach, originally developed by Abe Cohen, is the most widely accepted. Table 11.1 presents the ChartCraft box-size recommendations.

In order to switch from a negative swing to a positive swing, using the ChartCraft system, a three-box threshold is employed. This allows for a small enough box size that vital detail is not lost

Table 11.1 ChartCraft Recommended Box Sizes for Stocks

Price Range	*Box Size*
Below $5	¼ point
Between $5 and $20	½ point
Between $20 and $100	1 point
Above $100	2 points

at the same time a large enough filter is employed. So with the ChartCraft method, for a $10 stock a 1½-point reversal is needed to change swing direction ½ * 3. For a $70 stock a 6-point reversal is required to change swing direction (2 * 3).

The main problem with this approach is variability—abrupt, large changes at transition prices. For example, a $19 stock, with its half-point boxes, reverses swings with a 1½-point move, whereas a $20 stock, with its full-point boxes, requires a 3-point swing to reverse. Normally reversals get smaller in percentage terms as price rises, but there are places where higher prices beget higher percentage reversal values due to transitions in box sizes. Using our example, a $19 stock uses a 7.8 percent reversal, whereas a $20 stock uses a 15 percent reversal. You have to rally all the way to $40 before you get back to a 7.5 percent reversal.

A simple method of *smoothly specifying box size*, Bollinger Boxes, was developed in order to avoid the problems caused by the traditional rules. To create Bollinger Boxes, all of the historical methods used to specify box size from Wheelan to Cohen were tabulated. Then the rule sets were plotted, with price on the *x* axis and percent box size on the *y* axis. For each set of rules this process produced a stepped line to which a curve was fit (Figure 11.9). The formula for that curve was noted and the procedure repeated for each known box-size methodology. These procedures revealed an ideal box size that can be simplified to 17 percent of the square root of the most recent price (see Table 11.2).

As a control, the square root rule (SRR) was used. The earliest mention of the SRR is in Burton Crane's 1959 book, *The Sophisticated Investor*, where he cites Fred Macauley's writings in the *New York Times-Annalist* magazine as the original source.[2] The SRR suggests that volatility is a function of the square root of price;

Table 11.2 Sample Box Sizes Using Simplified Bollinger Boxes (0.17 * last^0.5)

Price	*Reversal*
$4.5	8%
$8	6%
$18	4%
$69	2%

for an equal move in the market, stocks will rally such that the square roots of their initial prices change by a similar amount. This rule produces large percentage gains for low-priced issues and large point gains for high-priced issues. From this perspective, low-price stocks are more volatile than high-price stocks. This is an intuitively correct idea. On average we expect that low-price stocks will experience greater percentage increases and decreases than high-price stocks.

There was relatively little variation between the historical methods that were plotted, and the fits to the SRR were near perfect.

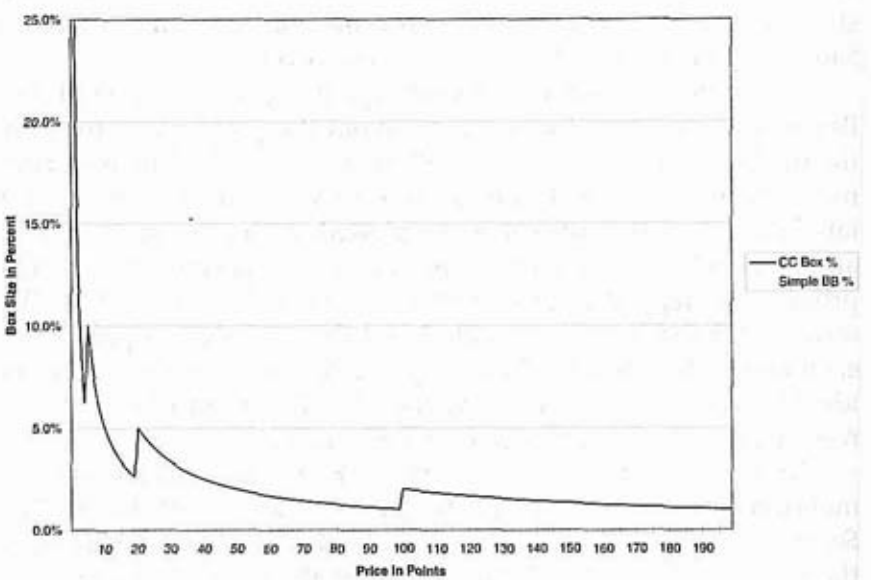

Figure 11.9 Curve fit for Cohen's point-and-figure box-size rules.

Using Bollinger Boxes to construct point-and-figure charts frees one from the artificial barriers created by the boundaries where box size is changed. This is obviously easier to do by computer, but then almost all technical analysis is computerized these days.[3]

Having developed an ideal approach to filtering stock prices, we may now proceed to categorizing the arising patterns. The first attempt to systematically categorize price patterns was made in 1971 by Robert Levy. He used five-point patterns delineated by price swings governed by each stock's volatility in his categorization and then tested those patterns for significance. Though he was unable to discover any significant forecasting power,[4] he left behind a powerful tool, the five-point categorization.

This approach lay dormant for 10 years until Arthur A. Merrill picked it up and published positive results in the early 1980s. He used the same five-point approach, but used an 8 percent filter instead of Levy's volatility filter. He ordered the patterns into two groups, 16 patterns with the general shape of a capital M and 16 with the general shape of a capital W.[5]

Merrill categorized the patterns by the sequential order of the points from high to low, creating an orderly taxonomy of Ms and Ws. An M1 is a strongly falling pattern, the middle patterns M8 and M9 are flat patterns, and an M16 is a strongly rising pattern (Figure 11.10). Likewise a W1 is a falling pattern, the middle Ws are flat, and a W16 is a rising pattern (Figure 11.11).

You also will find these patterns on the inside of the reference card bound into the back of this book. Merrill went on to show that some of these patterns had forecasting implications on their own. See his book *M&W Wave Patterns* for further information. Merrill also categorized some of the patterns according to the traditional names used by market technicians (see Table 11.3).

Where Merrill used a fixed-percentage filter, Levy used volatility to filter the patterns. We favor a combination of the two, Bollinger Boxes for filtering the swings and volatility for projecting the subsequent moves. Indeed, this approach lies at the core of our institutional trading platform, PatternPower, www.PatternPower.com.

One important aspect of M and W patterns is that they can be clarified using Bollinger Bands and indicators. In the following two chapters (Chapters 12 and 13) we'll consider Ms and Ws

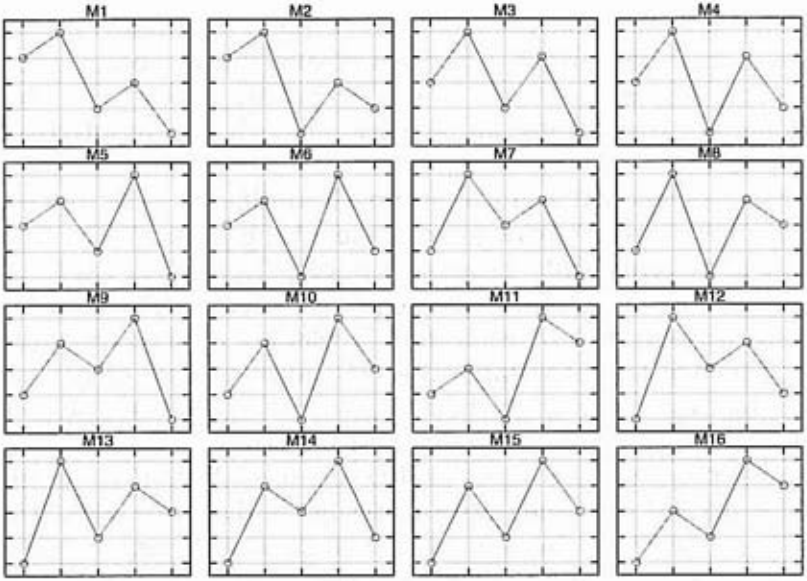

Figure 11.10 Arthur Merrill's M patterns. (SOURCE: *M & W Wave Patterns* by Arthur A. Merrill, Chappaqua, N.Y.: Analysis Press, 1983.)

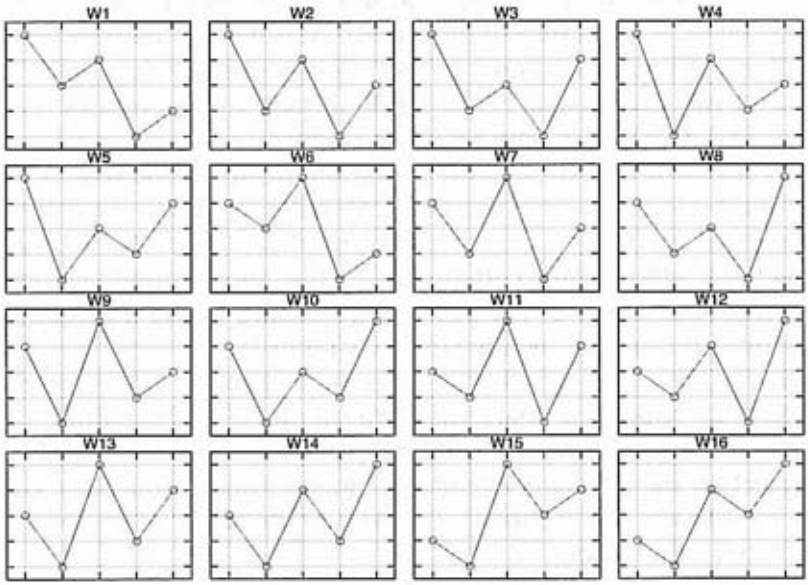

Figure 11.11 Arthur Merrill's W patterns. (SOURCE: *M & W Wave Patterns* by Arthur A. Merrill, Chappaqua, N.Y.: Analysis Press, 1983.)

Table 11.3 Merrill's Categorization of M and W Patterns

Technical Patterns	*Merrill's Patterns*
Uptrends	M15, M16, W14, W16
Downtrends	M1, M3, W1, W2
Head and shoulders	W6, W7, W9, W11, W13, W15
Inverted head and shoulders	M2, M4, M6, M8, M10, M11
Triangle	M13, W4
Broadening	M5, W12

separately, as they are quite different in character, and show you how to combine them with Bollinger Bands to increase your forecasting accuracy. Finally in Chapter 14 we'll add indicators to the mix.

KEY POINTS TO REMEMBER

- Price filters can be used to filter out noise and clarify patterns.
- Percentage filters are best for stocks.
- Bollinger Boxes offer a superior filtering approach.
- All price patterns can be categorized as a series of Ms and Ws.

CHAPTER 12

W-TYPE BOTTOMS

From here on out we'll be using M and W patterns to describe what's going on with price action. All the patterns are laid out on two pages of your reference card (which is bound into the back of the book), Ms on the left and Ws on the right. Pull it out (if you haven't already done so) so you can consult it easily when you need to.

We'll start with bottom formations. They are generally cleaner, clearer, and easier to diagnose than top formations. The difference lies in the underlying psychology; bottoms are created in an environment of fear and pain, quite different from the environment of euphoria and hope in which tops are formed.[1] Thus we expect bottoms to be sharper and more tightly focused, to take less time and be more dramatic. Pain is, after all, a more insistent emotion than joy. Likewise we expect tops to be more prolonged affairs, typically more diffuse and harder to diagnose. Investors

simply do not feel the need to act at tops in the same urgent manner they do at bottoms.

In the process of researching a recent project, we tested the characteristics of price patterns at intermediate lows and highs. Double bottoms and triple tops were the rule, and the time spent forming tops was greater than that spent in bottoms. This confirmed Wall Street lore that "down is faster" and agrees with what one would expect from a psychological perspective.[2]

Stocks rarely transition from a declining phase to an advancing phase in a crisp manner. Rather, they most often recover a bit, fall back to test support, and then rally. The pattern this process creates is called a double, or W, bottom (see Figure 12.1). The W is the most common bullish transition type, but it is not the only one. Though they are relatively rare, there are examples of stocks that plunge to new lows, turn on a dime, and rocket away. A stock making a V bottom may have stumbled across unexpected good fortune, or good news may suddenly be released, breaking the downtrend and instantly reversing the stock's fortunes. More common is the stock that falls to a new low, then trades sideways for a long time, then turns higher—"base building" in the parlance. This is often a stock that has had fundamental problems

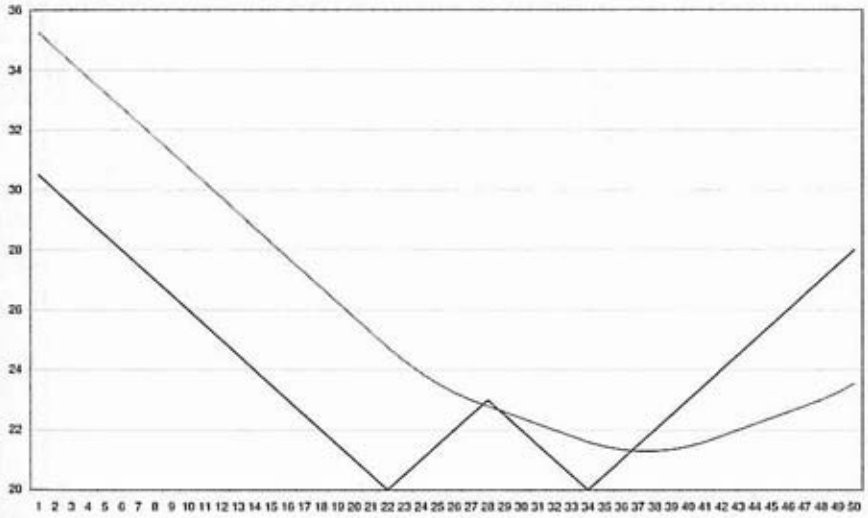

Figure 12.1 The ideal W, drawing. Typical W—the average stops the first rally but not the second.

and needs time to get its house in order. However, most frequent of all is the W bottom, a low followed by a retest and then an uptrend. This is typical of a stock completing a correction where the stream of fundamental facts about the company is not in question, where the questions are relatively minor, or where the questions are resolved in favor of the company before serious damage is done.

Ws can be formed in any number of ways, each with their own emotional color. The right-hand side of the formation can be higher than (Figure 12.2), equal to (Figure 12.3), or lower than (Figure 12.4) the left side. Each can be categorized as a Merrill pattern, and each depicts a distinct psychological pattern. Where the right side of the W is higher, frustration is the main emotion when investors waiting for a "proper retest" are left standing at the door as the stock rallies away from them. W4, W5, and W10 patterns are good examples of this. When the lows on the left and right sides of the formation are equal, satisfaction is the main emotion as investors buy into the retest without much trouble and are rewarded quickly. When the low on the right-hand

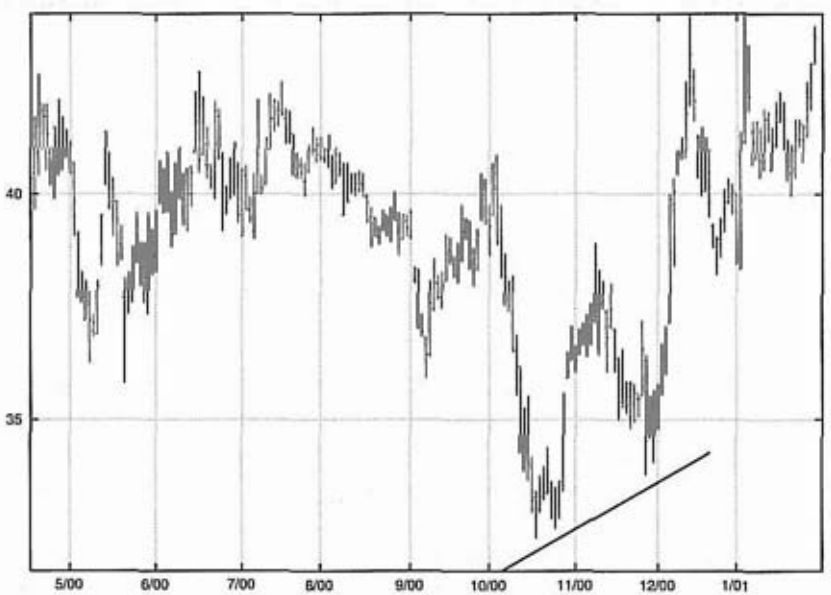

Figure 12.2 W higher, New York Times A, 200 days. Retest at a higher level.

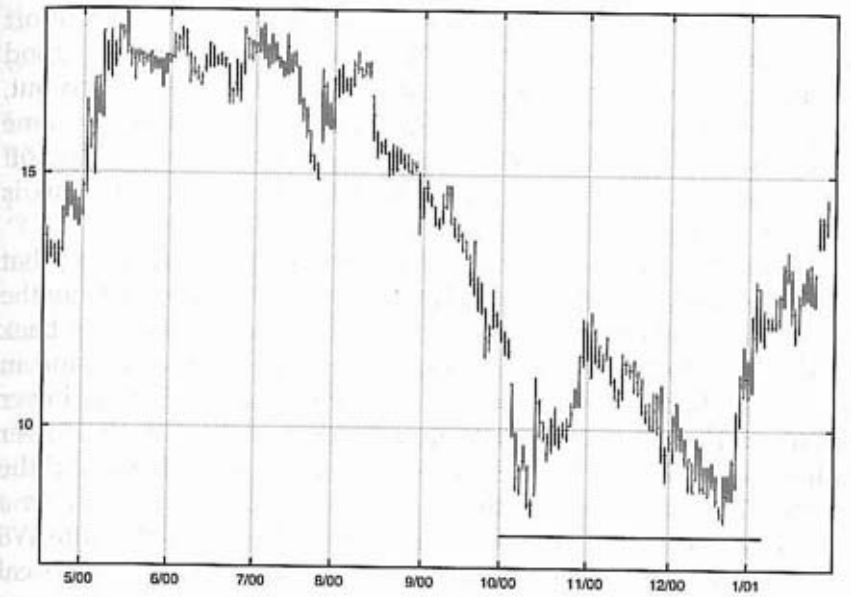

Figure 12.3 W equal, JCPenney, 200 days. Retest at the same level.

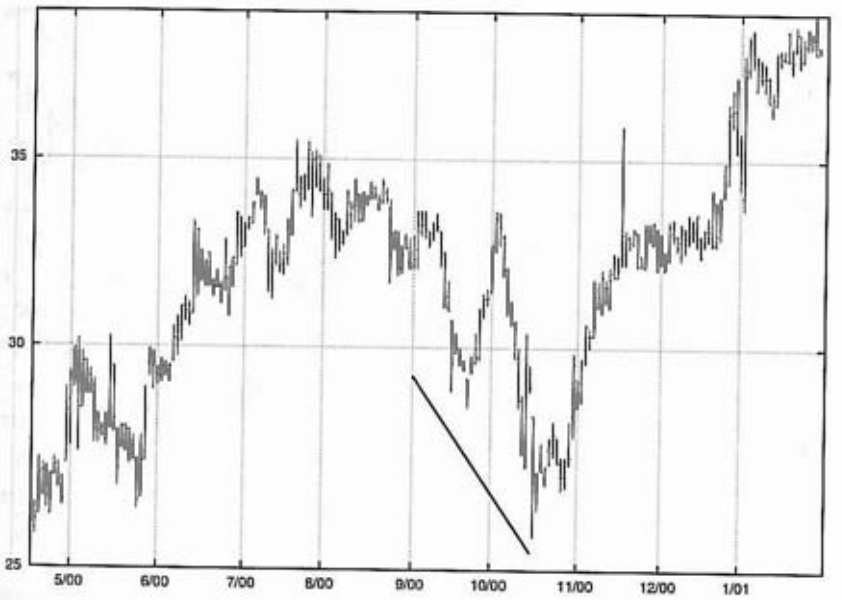

Figure 12.4 W lower, Starwood Hotels, 200 days. Retest at a lower level.

side of the formation is a lower low, fear and discomfort characterize the crowd. W2, W3, and W8 patterns are good examples. Investors who bought at the prior low are shaken out, and few have the courage necessary to get back in; at the same time new money is scared away by the lower low. In Wyckoff (referring to technical analyst Richard D. Wyckoff) terms this is called a spring.

Usually the left-hand side of a W formation—the first low, that is—will either be in contact with the lower band or be outside the lower band (Figure 12.5). The reaction rally will carry price back inside our bands, often tagging or exceeding the middle band in doing so. Then, the subsequent retest will occur inside the lower Bollinger Band. Remember, our definition of low is the lower Bollinger Band. So if the first low occurs outside the band and the second low occurs inside the band, *the second low is higher on a relative basis even if it is lower on an absolute basis.* An absolute W8 may turn out to be a relative W10, a much easier formation to deal with. Thus the Bollinger Bands can help you diagnose and act on

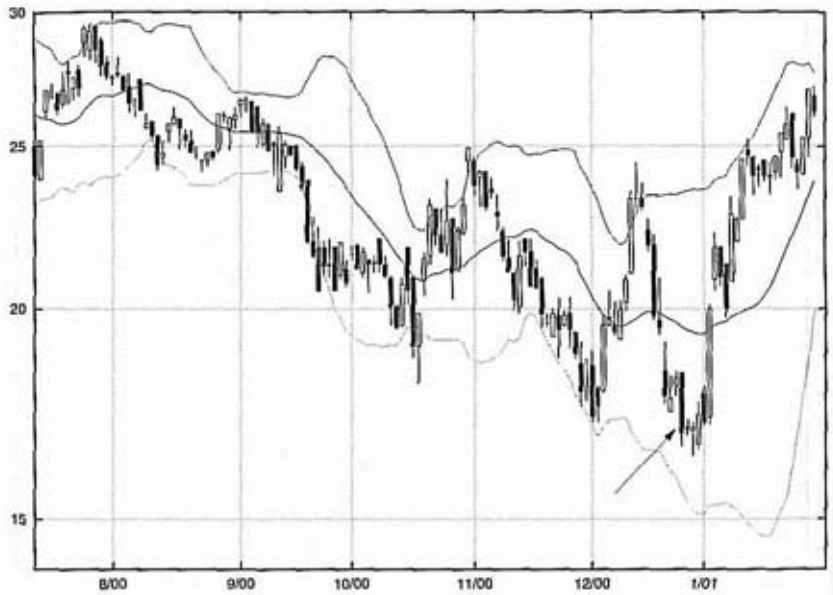

Figure 12.5 W bottom, Bollinger Bands, AT&T Wireless, 140 days. A new absolute low, but not a new relative low.

the trickiest of formations, the shakeout, where the potential for gains is great.

There will be examples of secondary lows occurring at or beneath the lower band and/or making new relative lows (Figure 12.6). These do not fit our categorization and are not, for our purposes at least, valid W bottoms. Please reread Chapter 4, "Continuous Advice," at this time if the concept of an undiagnosable formation rubs you the wrong way.

A stock does not have to trade beneath the lower band at the first low for a classic W bottom to be valid (Figure 12.7). All that is really called for is that price be relatively higher on the second retest. This requirement can be satisfied by price nearing, but not touching, the lower band on the initial pass, then trading only halfway between the lower band and the middle band on the retest. %b is very helpful in this regard, as will be discussed later.

Often bottom formations such as the double bottom, or W, contain smaller formations within them, especially at the next higher level of magnification. So if you are examining a bottom

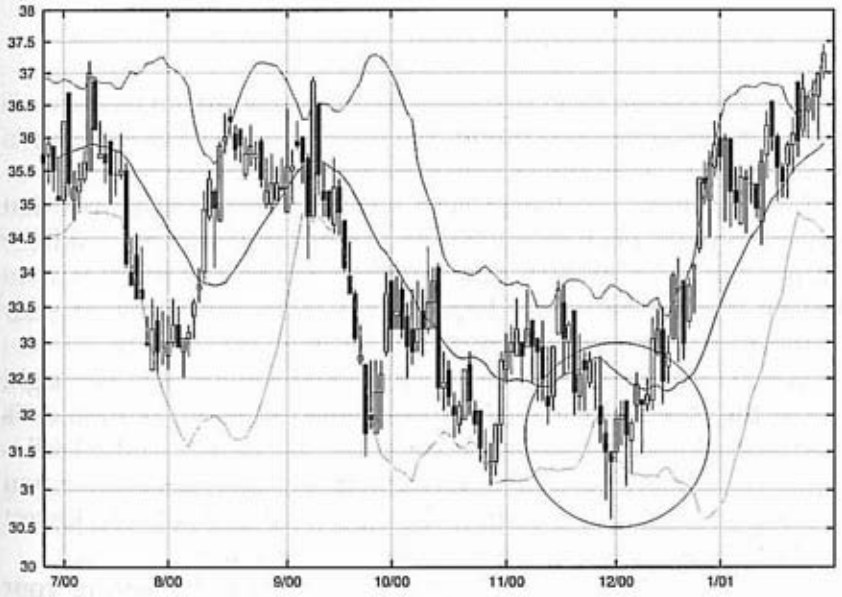

Figure 12.6 W bottom, lower Bollinger Band broken on right side, Ashland, 150 days. The excursion outside the lower band breaks the rules.

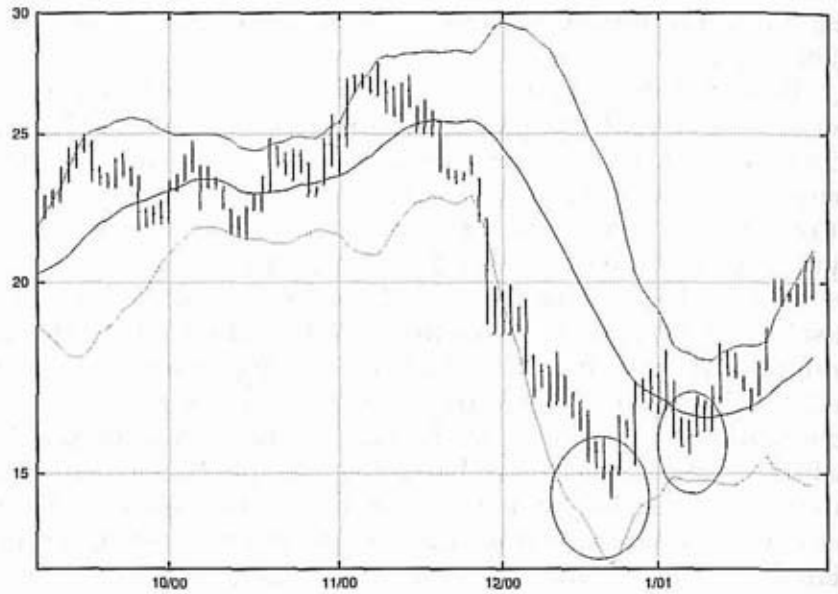

Figure 12.7 W bottom, neither low breaks the bands, The Limited, 100 days. A W completely inside the bands.

pattern forming on the daily chart, look for small-scale patterns o the hourly charts confirming the turns in the larger patter developing on the daily charts.

Okay, so now you have found a W that fits the rules and tha you are comfortable with—what do you do? Buy strength. Wait fo a rally day with greater than average range and greater tha average volume and buy (Figure 12.8). This day confirms you diagnosis of the formation and sets the stage for the rally.

Your stop should go beneath the most recent low—the rig side of the W—and should be incremented upward as soon as reasonable. Either you may use an approach similar to the Welle Wilders Parabolic System that increments the stop each day, or yo may increment by eye, setting the stop a bit beneath the lowe point of the most recent consolidation or pullback.

The room which you give prices to fluctuate by setting yo stops will greatly impact your performance. Stops that are set t tight will result in too many broken trades, while stops that are t loose will allow too great a portion of your profits to be retrace

Figure 12.8 W bottom, buy the expansion day, Chevron, 150 days. A surge in volume plus a large positive daily range after a W is a buy signal.

The best advice is to start with relatively wide stops and tighten them slowly until the risk-reward trade-offs suit your style.

In categorizing lows we find that the formations often have similar fundamental and psychological factors. In this we are reminded of our goal and indeed the purpose of technical analysis: to identify junctures in the market where the odds favor the assumption of a position. In order for this to be true, we must be able to believe in the patterns we are seeing, and in order to believe, we must understand the factors that lead to the formation. Technical analysis is not a stand-alone science; rather it is a depiction of the actions of investors driven by fundamental and psychological facts—or more properly, driven by anticipation of the facts.

The argot of technical analysis is rife with terms that describe various setups, some sharply, some vaguely, and some incomprehensively. It is only to the extent that such terms successfully model underlying realities that they are useful. For example, a W bottom with a lower right-hand side often becomes an inverted

Figure 12.9 Head and shoulders, W8 and W10, PNC, 300 days. A complex W may be a head-and-shoulders formation.

head-and-shoulders pattern (see Figure 12.9) when a final retest of support occurs after the uptrend has been born—a W8 becomes a W14 or W16 after another two more price swings. Simply put, the nascent uptrend is met with skepticism and profit taking, creating a decline that forms the right shoulder. However, head-and-shoulders formations fit more properly in the domain of top formations, which is what we cover next.

KEY POINTS TO REMEMBER

- W bottoms and their variations are the most common.
- Spike bottoms do happen, but they are rare.
- Ws may be transitions to bases rather than reversals.
- Bollinger Bands can help clarify Ws.
- Buy strength after the completion of a W.
- Set a trailing stop to control risk.
- Potential W bottoms are listed each trading day on www.BollingeronBollingerBands.com.

CHAPTER 13

M-TYPE TOPS

Tops are quite different from bottoms, and Ms are different from Ws. Speed, volatility, volume, and definition—all are apt to be different. Thus tops and bottoms of similar importance will not necessarily be mirrors of one another. Their patterns are a function of psychology. Panic is a much sharper, more forceful emotion than greed, so panic's portrayal on the chart is much clearer. Where the most typical bottoming pattern is a double bottom, or W, tops are typically more complex, with the most typical formation being the triple top. Just as in the case of panic bottoms, cases of spike tops do occur where an uptrend is sharply reversed, but they are relatively rare. Far more common are M-type tops, or double tops, that consist of a rally, a pullback, a subsequent failed test of resistance in the neighborhood of the prior highs, followed by the start of a downtrend. Most common of all, however, is the triple top, and a common variation of this is the head-and-shoulders top

(this is perhaps the technical term recognized by the widest rang of investors).

The head-and-shoulders pattern (see Figure 13.1) consists of a rally followed by a shallow pullback that forms the left shoulder Then the head is formed by a rally to a new high followed by a steeper pullback that typically ends near the low established by the first pullback. An M15 pattern would be typical of this phase Finally a failure rally that is unable to make a new high—ideally ending near the first peak—followed by a decline that falls beneath the levels established by the first and second declines—a leve known as the neckline—forms the right shoulder. The new pattern could be the M15 morphing into an M12 or M7 after two mor price swings. The last part of the formation is a throwback rally which carries prices back into the neighborhood of the neckline After the final two swings, we now have an M1 or M3 pattern From there the decline begins in earnest. Volume in a head-and shoulders rally also has a typical pattern—strongest on the lef side of the formation, waning across the middle, and picking up a the decline gets under way.

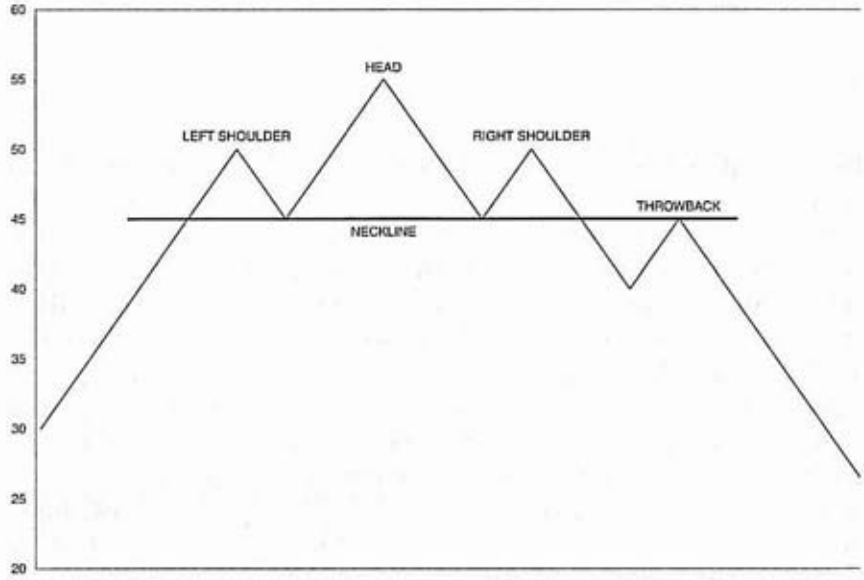

Figure 13.1 Idealized head-and-shoulders top. The most commonly known chart pattern.

Both the price pattern and the accompanying volume are closely linked to the underlying psychology. Euphoria and greed characterize the left side of the formation, with rumor often the dominant informational vehicle. Volume is high and activity heavy. The head is often accompanied by the release of the news that the rumors anticipated. Although we are at a new high, volume does not confirm. Here the old saw "sell on the news" comes into play, as those who bought in anticipation of the news, or due to the rumor, move to take profits. Their selling, accompanied by some short selling by the pessimists, forms the right side of the head and sets the stage for a last, weak bout of optimism that forms the right shoulder. Action is desultory and volume low. Now the decline sets in for real, the neckline is broken, and volume picks up again and fear surges. Finally, the covering of short sales by those who anticipated the decline and sold short near the highs is often said to be a factor in the throwback rally to the neckline. (Short sellers have to buy their shares back to close their positions.) The throwback rally is the last good chance to get out; ahead lie lower prices. See Figure 13.2 for a real-world example.

Fortunately, the diagnosis of all this is greatly helped by Bollinger Bands. The easiest way to tackle tops is to break them down into their component parts and treat them as a series of Ms and Ws. These smaller pattern components are much easier to cope with than the big pattern, but first let's look at the big pattern in an ideal sense.

The classic pattern would be a left shoulder outside the upper Bollinger Band, a head that tagged the upper band, and a right shoulder that failed well short of the upper band (Figure 13.3). In an ideal world the neckline would coincide with the middle band at the right shoulder, and the first decline would stop at the lower band. The throwback rally would stop at the middle band, and, finally, dramatically, the first leg down would break the lower band. That's the ideal, but the odds of seeing such a pattern, perfect in every respect, are not high. Much more common would be a pattern that obeyed most of those rules, offering general guidance as the pattern unfolded.

There is one very common variation of the head-and-shoulders pattern you should be aware of, three pushes to a high (Figure 13.4). This pattern often develops as the leading edge of larger,

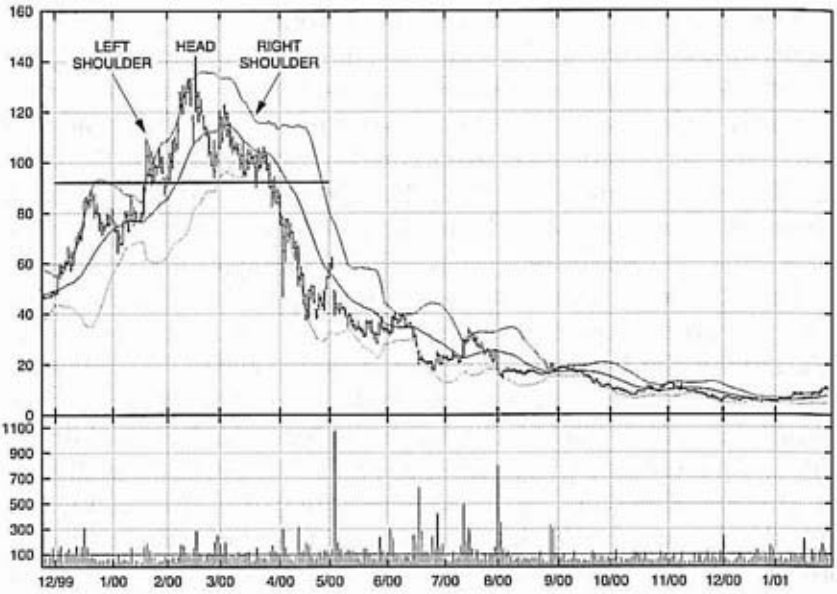

Figure 13.2 Actual head-and-shoulders top, Vishay, 250 days. Hea and shoulders are rarely picture perfect; look for the key elements clarify the picture.

longer top formations. Typically the first push will be outside tl upper band, and the second push will make a new high and tou the upper band. The third push may make a marginal new high- more often not—but will fail to tag the band. Volume will dimini steadily across the pattern. This is a portrait of failing momentu a portrait many stocks paint as their tops form. The typic building blocks would be M15s or M16s.

The first part of a head-and-shoulders formation is an formation that consists of the left shoulder and head. M14 ar M15 patterns or a blend of them would be typical. The next part another M consisting of the head and right shoulder. M3 and M or M7 and M8 formations would be typical right-should patterns. The final part is also an M consisting of the rig shoulder and the throwback rally, typified by an M1 or M However, starting with the first trough after the head, you mig wish to analyze the patterns as a series of Ws, as the formati now has a downside bias with a lower high and the potential for

Figure 13.3 Head-and-shoulders top with Bollinger Bands, S1, 300 days. This is messy, but all the parts are there.

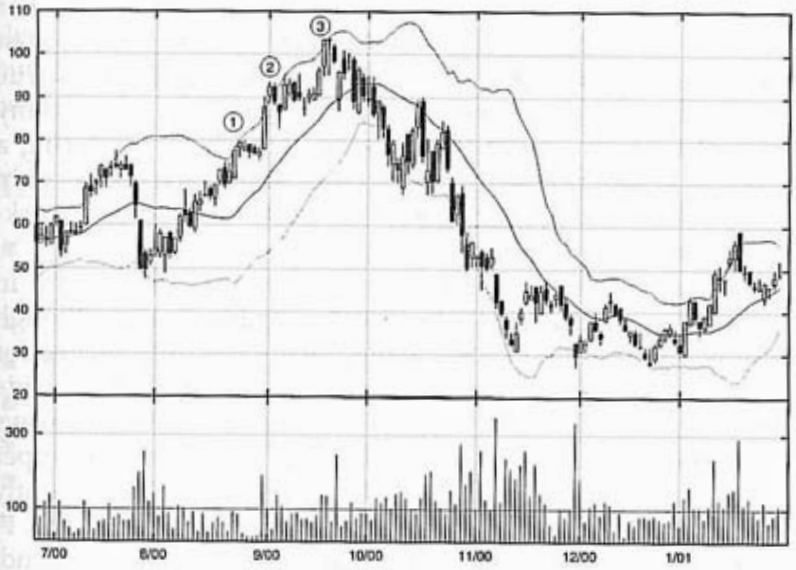

Figure 13.4 Three pushes to a high, Juniper, 200 days. Note the preponderance of black candlesticks after the final high.

lower low. A W1 or W2 would be the pattern to look for on a throwback rally.[1]

Of course, you can get even more detailed, counting each M and W as it presents itself—there would be a total of five in a head-and-shoulders pattern—and testing each for relevance. But there isn't much need to do that, except perhaps for shorter-term traders looking for setups within the context of the formation. For position traders, observing the formations as they evolve and noting their bias is generally enough.

As was the case with bottoms, often top formations such as the head-and-shoulders pattern contain smaller formations within them, especially at the next higher level of magnification. So if one is examining a head-and-shoulders pattern forming on the daily chart, look for small-scale patterns forming on the hourly charts confirming the larger pattern on the daily charts.

When you have detected a formation you think qualifies, wait for a sign of weakness to confirm your diagnosis before acting. This can be defined as a day with greater-than-average volume and greater-than-average range. There is another aspect to successful trade entry that was not discussed in the prior chapter, patience. Often after the sign of weakness there will be a countertrend rally that will provide a perfect entry point. For example, the throwback rally after the neckline is broken often provides a perfect entry point (Figure 13.5). Of course, this is true of bottoms too, but it seems clearer in relation to tops. Many professional traders require this type of setup before entering a trade, as it lets them precisely define their risk-reward relationship by setting a stop just above the top of the pullback. Very good risk-reward ratios are achievable this way.

With tops, relativity is the key, just as it was with bottoms. In many cases your outlook will need to turn cautious even though an absolute new high has been made. Really the only device for doing this successfully is Bollinger Bands. A high made outside the bands followed by a new high made inside the bands is always suspect, especially if the second (new) high fails to tag the upper band. This is the only approach we know of that can consistently warn of danger at a new high or opportunity at a new low. A particularly clear sequence is a high made outside the upper band, a pullback, a tag of the upper band, a pullback, and then a final rally that fails to achieve the upper band at all. In Part IV we'll

Figure 13.5 Throwback entry into a sell, Integrated Device, 150 days. Is it a right shoulder or a throwback? It doesn't matter; all that matters is the low-risk entry point it creates.

show you how to combine this information with indicators to build greater confidence in your ability to recognize important junctures for stocks.

KEY POINTS TO REMEMBER

- Tops are more complex than bottoms; hence they are harder to diagnose.
- The best known top is the head-and-shoulders.
- Three pushes to a high is a very common formation.
- The classic top shows steadily waning momentum.
- Wait for a sign of weakness.
- Look for countertrend rallies to sell.
- Potential M tops are listed each trading day on www.BollingeronBollingerBands.com.