Most traders have heard of the head-and-shoulders pattern, but they cannot describe the price criteria or characteristics that define a valid, tradable pattern. It takes more than just one head and two shoulders — these merely constitute the skeleton of the pattern. Consider Figure 1 (left): What’s wrong with this seemingly near-perfect example of a head-and-shoulders bottom?

To answer that question it’s necessary to establish some identification guidelines. By analyzing the price, volume and time characteristics that result in favorable price moves, it’s possible to weed out weak pattern examples and focus on those with the best odds of success.

Valid pattern criteria
The first guideline is simple: Look for a pair of shoulders on opposite sides of a head. Because we’re discussing bottom and not top patterns, the head should protrude below the lows of the two shoulders. If it doesn’t, the
pattern might actually be a triple bottom. If the head is well above the shoulder lows, the pattern might be a double bottom. Analyzing 336 head-and-shoulders bottoms revealed such patterns formed in downtrends and reversed those trends 85 percent of the time.

The head-and-shoulders pattern forms on the step where prices retrace some of the prior gain before continuing the up trend.

The next guideline — and it is key — is symmetry. The left shoulder should look like the right shoulder. If the left shoulder looks “fat,” the right should also look like it’s been hitting the potato chips as well. If the right shoulder is narrow, the left shoulder should appear similar.

The distance from each shoulder to the head should be similar, too. The time from the left shoulder low to the head should approximate the time from the head to the right shoulder low.

In regard to price criteria, both shoulder lows should occur near the same price. Figure 1 shows the left bottom at 32.63 and the right at 32.13, a difference of 1.5 percent. However, the price difference between the shoulder lows is less important than the previously mentioned symmetry characteristics.

The third guideline is volume. Typically, volume is highest at the left shoulder, diminishes at the head, and is lower still at the right shoulder. Sometimes the head wins the volume contest, as Figure 1 shows, but the right shoulder usually has the lowest volume.

Of the 366 pattern examples, when the right shoulder volume was higher than the left shoulder volume the price moves emerging from the pattern were, on average, eight percentage points larger than the rest — a significant improvement.

So, returning to the question at the outset of the article, what’s wrong with Figure 1? Nothing, except in a perfect

![FIGURE 2 FLAWED PATTERN](image)

**This is not a valid head-and-shoulders bottom because the shoulders are too far away (on a price basis) from the head.**

Dow Jones 30 Industrials (DJI), daily

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<td>7,891</td>
<td>7,532</td>
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This is not a valid head-and-shoulders bottom because the shoulders are too far away (on a price basis) from the head.

Spots the weaknesses

Seeing something like Figure 2 (above) touted on a Web site as a head-and-shoulders bottom can make experienced chartists tear their hair out. Yes, the left and right shoulders occur near the same price. Yes, both are similar in width — but notice how far they are (in price) from the head. The “wings” of this pattern are too far away and not too near, but proportional. The width of the shoulders and the distance of each from the head should be similar. Also, the shoulder lows should occur at roughly the same price level. Finally, volume is typically strongest on the left shoulder and weakest on the right, but expect variations.
Turkey are too far away from the head to be a valid head-and-shoulders pattern.

Admiring necklines
In contrast to Figure 2, Figure 3 (left) is a valid head-and-shoulders bottom — even though it is unusual because of the right shoulder’s towering volume (higher than that of either the head or the left shoulder). But the most interesting aspect of this pattern is its neckline.

A neckline is a resistance line that joins the two highs between the shoulders and signals an upward breakout — sometimes.

When price closes above the neckline, it signals the completion of a valid head-and-shoulders pattern and a buy signal.

In Figure 1, the neckline sloped downward, which means the buy signal comes sooner than it would if the neckline sloped upward. But if the neckline slopes sharply upward, you may never get a buy signal. Try this approach when the neckline slopes up: Buy when price closes above the high between the right shoulder and the head. In Figure 3, that is a close above 52.50, which is well below the neckline buy signal of 54.95.

Complex bottoms
Sometimes you will come across a head-and-shoulders bottom like the one in Figure 4 — a complex head-and-shoulders pattern. This one has two left shoulders, one head and two right shoulders. Other times, a complex pattern will have the typical two shoulders (one on either side of the
head) but two heads. Rarely will you find a complex head-and-shoulders bottom with both multiple shoulders and multiple heads. Avoid patterns with an odd number of shoulders — for example, two on the left and one on the right.

The identification guidelines for the complex variety are similar to simple head-and-shoulders formations. The head(s) must be below the shoulders. The shoulders should be symmetrical in shape and distance from the head. Notice how the far-left and far-right shoulders in Figure 4 (opposite page) are both spikes. Now compare the inner two shoulders: Both appear “fat.” (In fact, two additional shoulders appear as one-day downward spikes: three evenly spaced spikes on the left and a cluster of two then one farther away on the right.)

A key feature of a complex bottom is the horizontal (or nearly so) neckline. Near-horizontal necklines occurred in 74 percent of the patterns studied. To draw the neckline for these patterns, connect the highest highs in the shoulders, as shown in Figure 4. Again, volume is usually higher on the left shoulder(s) compared to the corresponding right one(s). Overall, the volume trend recedes.

**Pattern performance**

*Trading Classic Chart Patterns* (see “Additional reading,” p. 43) included an analysis of more than 450 head-and-shoulders bottoms and found some unusual behavior among these formations. Patterns with downward sloping necklines resulted in the largest gains after the neckline breakout (a close above the neckline) to the highest high before a 20-percent decline. Head-and-shoulders bottoms with up-sloping necklines performed worst.

When the lows of the two shoulders occurred at the same price, performance was best, followed by patterns with higher left shoulders than right shoulders. Confused? Look at Figure 5 (above). The right shoulder low (24.61) is lower than the left side (24.64). That combination resulted in performance that was second-best out of the three possible combinations.

Performance after the breakout improved when the left-shoulder volume was less than the right-shoulder volume. Also, a high-volume breakout propelled price farther than an average or below-average volume breakout.

Of the 239 complex head-and-shoulders bottoms in the study, down-sloping necklines outperformed the up-sloping variety. Comparing the price levels of the two outermost shoulder lows revealed a slight performance improvement when the far-right shoulder low was higher than the far-left one. Finally, similar to the simple version of the pattern, high-volume breakouts propelled prices farther than low-volume breakouts.

**Trade example**

Figure 5 illustrates how to trade a head-and-shoulders bottom. After a rapid, straight-line decline from the triple top a head-and-shoulders bottom pattern formed. The pattern had favorable symmetry, both in terms of shoulder shape and shoulder distance from the head. The head and shoulders looked proportional (that is, they didn’t resemble those in Figure 2) and the volume on the right shoulder was well below that of the left shoulder or the head.

When price closed above the neckline, confirming the pattern, you might consider buying. How far could you expect price to rise? Overhead resistance from the triple top loomed at approximately 32.50. Price might push through the resistance, offering further evidence of upward momentum, but why wait? If price stalled at the resistance zone, you could look elsewhere for a better opportunity.

The time from the peak at top 3 to the head was about two months. If price retraced by soaring in a straight-line run as expected, it would take about the same time.

On the downside, when things go wrong, the two shoulder lows act as a support zone — and a good place for a trade example continued on p. 43
stop-loss order. The right shoulder was the lower of the two, with a price of 24.61.

Going long the day after the breakout resulted in a fill at 27.50. A rally to the target at 32.50 would result in a tidy 18-percent gain in two months — an annualized return of 108 percent. If price hit the stop-loss order at 24.50, the trade would lose 11 percent.

Looking closer, despite the large one-day price spike during the breakout, volume on the entry day was about average. (Recall that high volume on the breakout helps propel prices higher.) In this case, prices slid along the neckline for three days before moving higher.

Things looked good for a while — until September, typically the most negative month of the year. In August, it was reasonable to think price would reverse the two-month down move that began at top 3. Instead, price stair-stepped downward until the stop-loss order triggered at 24.50. Price bottomed three days later then took off to the upside, hitting the price target (the overhead resistance at 32.50). After that, price formed a triple top and then declined.

What went wrong? Nothing. In a bear market, hope for the best but plan for disaster. We did everything right, including setting a price target and placing a stop-loss order to protect capital.

One misstep might have been ignoring the mediocre volume on the breakout day. Another was that September was looming — a stormy month in a nervous bear market.

Recognize the hallmarks

The hardest part about trading chart patterns is correctly identifying the ones with the most favorable characteristics. The guidelines outlined here for head-and-shoulders bottom patterns allow you to use price, time and volume criteria to focus on formations with the best trade potential.

When trading these patterns, wait for a close (not just an intraday penetration) above the neckline (or above the highest high between the right shoulder and head for up-sloping necklines). Look for overhead resistance before placing a trade so you’ll know how far prices are likely to climb. Support occurs near the lower of the two shoulders. If price drops below that level, sell immediately.

For information on the author see p. 10

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Additional reading

Books:

Encyclopedia of Chart Patterns by Thomas Bulkowski (John Wiley & Sons, 2000)

Trading Classic Chart Patterns by Thomas Bulkowski (John Wiley & Sons, 2002)

Article:
