Money-Making Candlestick Patterns

Backtested for Proven Results

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STEVE PALMQUIST
# TABLE OF CONTENTS

Preface • ix

Foreword by Oliver L. Velez • xiii

**Chapter 1**: Candlestick Basics and Testing Requirements • 1

**Chapter 2**: Bullish Engulfing Patterns • 25

**Chapter 3**: Bearish Engulfing Patterns • 63

**Chapter 4**: Hammer Patterns • 89

**Chapter 5**: Hanging Man Patterns • 113

**Chapter 6**: Morning Star Patterns • 135

**Chapter 7**: Evening Star Patterns • 159

**Chapter 8**: Market Adaptive Trading Techniques • 185

**About the Author** • 219

**Index** • 221

**Trading Resource Guide** • 241
One of the most common questions I get from subscribers to my newsletter, *The Timely Trades Letter*, usually comes from new subscribers who wonder how I “knew” that a recent setup would trigger and be profitable. New traders tend to believe there is a magic indicator that will tell them when a trade is going to work. This is not the case; there are no foolproof indicators that work all the time. Trading is about finding patterns that have favorable statistics, understanding how market conditions and various parameters affect the statistics, and then trading the pattern using effective money management techniques.

As we’ve seen, in order to better understand the statistics for a trading pattern, it can be backtested. Backtesting is not a guarantee of future results; it simply provides the trader with a good understanding of how the trading pattern has worked in the past. To build confidence that a trading pattern’s results are likely to be replicated in the future, traders test them over hundreds or thousands of cases. It is a reasonable bet that something that has worked hundreds of times in the past has a reasonable chance of working in similar conditions in the future.

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**CHAPTER 3**

**BEARISH ENGULFING PATTERNS**

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Remember, it is also important to test a potential trading pattern in multiple time frames and in different market conditions to gain a better idea of its overall performance and the type of market conditions in which it works best. You need to backtest potential trading patterns because not every pattern tests well in the long run. Knowing what not to trade may be just as important as knowing what to trade.

**DEFINITION OF BEARISH ENGULFING PATTERN**

Let’s take a closer look at the bearish engulfing pattern. A bearish engulfing pattern may occur after a stock has been in an uptrend. The first day of this two day pattern shows a white body indicating that the stock was still moving up. The second day of the pattern has a black body that completely covers or engulfs the body of the previous day. The top of the black body represents the opening price, which has gapped up, and it is above the top of the previous day’s body, which represents the closing price for the first day of the pattern. After the open on the second day, the stock may move up further, depending on whether the second day’s candlestick has a top shadow or tail. Because the second day is a black candle, at some point during the day, the sentiment reversed and the price started declining. This may signal a further decline in the short term.

Figure 3.1 shows a bearish engulfing pattern that occurred in CEM on 04/17/07. CEM was trending up during March and the first half of April. On April 16, CEM showed a white bar followed by a black bar on the following day that overlapped or engulfed the white body of 04/16. The second day of the bearish engulfing pattern is marked by a down arrow in Figure 3.1. After the bearish engulfing pattern occurred, CEM moved down more than 4% in the next five days, creating a profitable short position.

If the bearish engulfing pattern marked the end of an uptrend and moved down every time it occurred, traders would quickly become rich by entering short positions when they observed bearish engulfing patterns forming. Unfortunately in actual practice, bearish engulfing patterns, like most trading patterns, have varying degrees of success. Some of the patterns work quite well, others generate small returns, and some lose. One of the tricks to
trading patterns is to understand the factors that maximize the probability of a profitable trade.

Figure 3.2 shows a bearish engulfing pattern that occurred in DO on the same date, 04/17/07. In this case the bearish engulfing pattern, marked by the down arrow, did not mark the beginning of a significant change in trend as did the bearish engulfing pattern for CEM on the same date. Shorting DO resulted in a profitable trade for the first three days, followed by two days where the trade would have been about break even, followed by a resumption of the original uptrend, which would have resulted in a loss if the short position was held too long.

Figure 3.3 shows a third example of a bearish engulfing pattern that occurred on the same date, 04/17/07. GGB formed a bearish engulfing pattern on
04/17/07 as marked by the down arrow. In this case, the stock continued moving up over the next two weeks and a short position held for anywhere between one and 10 days would have been unprofitable.

**DETERMINING THE OPTIMAL MARKET TO TRADE**

The three bearish engulfing patterns I just outlined all occurred on the same date and yet provided different results for short positions. Like I’ve said before, trading is a statistical business and not every pattern results in a profitable trade. The trader must understand how often the pattern produces a profitable result and the effects of various parameters such as volume, price level, and average volume, as well as the effects of varying...
different parameters involved in the definition of the pattern. Bottom line, it’s time to start testing again.

**FIRST TEST PERIOD: 1/3/06 TO 5/1/07**

Figure 3.4 shows the results of testing the bearish engulfing pattern during the period of 01/03/06 to 05/01/07. The results show that during this period the pattern not only performed worse than buy and hold, it actually lost money. In fact, losing trades occurred more than 55% of the time and less than 44% of the trades during this period resulted in a profit. The initial backtesting results raise a caution flag.
The market is always changing, and during certain market conditions some systems perform better than others. It is important to check a potential trading system in multiple time frames and also in different market conditions. Figure 3.5 shows the results of increasing the test period by a year and testing the basic bearish engulfing pattern during the period of 01/03/05 to 05/01/07.

Increasing the length of the testing period by one year significantly changed the results. The bearish engulfing pattern still shows a loss for the test period, but it was reduced from a loss of 35% for the first test to a smaller loss of 26% when adding a year to the test period. One possible explanation for this is that the results of using the bearish engulfing pattern depend on the market conditions in which it is used.

FIGURE 3.4:
BEARISH ENGULFING BACKTEST DURING 1/03/06 TO 5/01/07

Courtesy of AIQ

TEST PERIOD INCREASED TO ONE YEAR

The market is always changing, and during certain market conditions some systems perform better than others. It is important to check a potential trading system in multiple time frames and also in different market conditions. Figure 3.5 shows the results of increasing the test period by a year and testing the basic bearish engulfing pattern during the period of 01/03/05 to 05/01/07.

Increasing the length of the testing period by one year significantly changed the results. The bearish engulfing pattern still shows a loss for the test period, but it was reduced from a loss of 35% for the first test to a smaller loss of 26% when adding a year to the test period. One possible explanation for this is that the results of using the bearish engulfing pattern depend on the market conditions in which it is used.
In order to test this theory, we have to consider what different types of trading environments the market can present us with. We know there are only three things the market can do. It can move down, move up, or move mostly sideways. Testing the bearish engulfing pattern in each of these three different market conditions will let us know if the pattern works better in one of the three market types.

**DOWNTREND MARKET**

During the period of 12/31/04 to 04/28/05, the market was in a downtrend and dropped about 200 points, or about 10%, as shown in Figure 3.6. Testing the basic bearish engulfing pattern with a three day holding period during
this period resulted in 1,859 trades and a 31% annualized ROI, which is quite favorable as compared to the approximate 10% loss in the NASDAQ. Profitable trades equaled about 58% and only 40% resulted in losses. This is a significant improvement over the previous results.

**SIDEWAYS MARKET**

During the period of 11/17/05 to 03/13/06, the market moved mostly sideways within a 100 point range, as shown in Figure 3.7. Testing the basic bearish engulfing pattern during this period, when the market was stuck in a trading range, resulted in 2,880 trades and a 45% loss. Fewer than 45% of the trades were winners and more than 54% were losers. It would appear that at least in these two cases, the basic bearish engulfing pattern performs better when the market is in a downtrend than when it is moving sideways in a range.
UPTREND MARKET

The third market condition is an uptrend, such as the market experienced during the period of 08/11/06 to 11/17/06, as shown in Figure 3.8. Running the basic bearish engulfing pattern with a three day holding period during this bullish market period resulted in 2,627 trades that showed an annualized ROI of negative 69%. Less than 37% of the trades were profitable and the trading pattern lost money on more than 62% of the trades. This was the worst result so far.

The test results are interesting and show that in these cases the bearish engulfing pattern works best in a downtrending market and should be avoided in sideways or uptrending markets. Testing the basic bearish engulfing pattern in another market downtrend, the period between 07/28/05 and
10/17/05, confirms the previous results by showing a 38% annualized ROI for the 1,451 trades made. More than 54% of the trades were profitable.

After testing the bearish engulfing trading pattern in two different time frames and all three types of market conditions, we find that the only times it has shown profitable annualized ROIs were the two times it was tested in bearish markets. Additional testing bears out the results that this trading pattern works best in declining markets and provides poor results in trading range or bullish markets.

Many trading patterns show specific market environments in which they perform well; and others where they are best avoided. One of the keys to trading involves knowing which is which. Unless traders study the results of large numbers of trades in different market conditions, they will not know when to use each pattern in their trading toolbox. Using the same pattern in
all market conditions may just churn the account. Selecting the right pattern for the current market conditions may improve trading results.

## VARYING THE HOLDING PERIOD

Table 3.1 shows the effect of varying the holding period for the basic bearish engulfing pattern when running the test during the market downtrend of 12/31/04 to 04/28/05. The best results are obtained using a four day holding period and the annualized ROI drops off consistently for longer holding times. The bearish engulfing pattern is a short term trading pattern and the longer the position is held, the lower the results. Each trading pattern seems to have time frames that it likes best. It is a good idea to check this information for every pattern you intend to use.

<table>
<thead>
<tr>
<th>HOLDING PERIOD</th>
<th>ANNUALIZED ROI</th>
<th>WINNING PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Days</td>
<td>31.63%</td>
<td>58.36%</td>
</tr>
<tr>
<td>4 Days</td>
<td>38.06%</td>
<td>59.13%</td>
</tr>
<tr>
<td>5 Days</td>
<td>30.35%</td>
<td>58.01%</td>
</tr>
<tr>
<td>6 Days</td>
<td>29.34%</td>
<td>57.73%</td>
</tr>
<tr>
<td>7 Days</td>
<td>22.58%</td>
<td>56.71%</td>
</tr>
</tbody>
</table>
CONTINUING THE INVESTIGATION—
EFFECT OF DIFFERENT FILTERS

Up to this point, our testing has established that traders should consider focusing bearish engulfing trades on periods when the market is in a downtrend. Knowing the market environment in which to use a trading pattern is critical. Now we will investigate the effects of different filters on the basic bearish engulfing pattern to see if there are ways to improve the trading results.

DOLLAR VALUE

For some trading patterns, the dollar value of the stock can influence the trading results. In order to investigate the effect of stock price on the bearish engulfing pattern, we ran the backtest during the 12/31/04 to 04/28/05 period using a price filter. The results are shown in Table 3.2. Each set of data is based on a three day holding period.

For this test period, the percent of winning trades and the annualized ROI generally increased as the closing value of the stock rose. The number of trades decreased with each increase in price. In Table 3.2 there are 1,256 trades when limiting the bearish engulfing pattern to stocks above $20. This decreases to 64 trades when considering only bearish engulfing trades in stocks priced above $70 during the test period.

We would obviously expect the number of trades to decrease as the trade candidates are limited to higher and higher prices. Sixty-four trades in four months are still enough to be statistically significant, and the interesting thing about Table 3.2 is that the winning percentage consistently increased as we limited trades to higher dollar-value stocks.

The price of the stock is something we may want to consider when taking trades. If further testing uncovers better filters, we may not use price as a factor because multiple filters can reduce the number of trades in the test period to something that is not statistically significant. We want to examine several different filters and then select the ones that provide the most leverage.
with the lowest reduction in the number of potential trades available. In the case where a particular day presented me with more trades than I wanted to take, I could always use the price level to prioritize the trading possibilities.

**TABLE 3.2**
TEST RESULTS FOR 12/31/04 TO 04/28/05 WITH DIFFERENT PRICE LEVELS

<table>
<thead>
<tr>
<th>CLOSING PRICE</th>
<th>ANNUALIZED ROI</th>
<th>WINNING PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>34.15%</td>
<td>59.63%</td>
</tr>
<tr>
<td>30</td>
<td>38.94%</td>
<td>60.58%</td>
</tr>
<tr>
<td>40</td>
<td>32.86%</td>
<td>60.98%</td>
</tr>
<tr>
<td>50</td>
<td>51.43%</td>
<td>63.24%</td>
</tr>
<tr>
<td>60</td>
<td>62.74%</td>
<td>68.38%</td>
</tr>
<tr>
<td>70</td>
<td>102.83%</td>
<td>76.56%</td>
</tr>
</tbody>
</table>

**VOLUME**

Another filter that often affects trading patterns is volume. Volume measures the interest in a stock. Stocks that are moving up on increasing volume are showing that more people are willing to pay more money for the stock every day, just the kind of thing you want to own. Stocks that are moving up on less volume every day indicate that fewer people are willing to pay more money for the stock, and perhaps it is time to take profits.

The average volume shows the overall interest in a stock. High volume stocks have institutional support almost by definition. Lower volume stocks are often not followed by institutions because they must take large positions and cannot get in and out easily. In order to determine if the average daily trading volume affects the results of trading the bearish engulfing pattern, I ran the backtest for the 12/31/04 to 04/28/05 period seven times with a
different minimum average trading volume requirement each time. The average volume is computed as the simple moving average of daily volume over a 21 day period. The results are shown in Table 3.3.

The results are different from those of the price testing shown in Table 3.2. When we increased the minimum price requirement for taking a bearish engulfing trade, the winning percentage increased every time. When the average volume requirement for taking a bearish engulfing pattern trade was increased, the results were not smooth. Sometimes they increased between volume levels and sometimes they decreased.

<table>
<thead>
<tr>
<th>AVERAGE TRADING VOLUME</th>
<th>ANNUALIZED ROI</th>
<th>WINNING PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>200,000</td>
<td>36.64%</td>
<td>58.13%</td>
</tr>
<tr>
<td>400,000</td>
<td>35.77%</td>
<td>57.47%</td>
</tr>
<tr>
<td>600,000</td>
<td>35.12%</td>
<td>57.34%</td>
</tr>
<tr>
<td>800,000</td>
<td>34.39%</td>
<td>55.77%</td>
</tr>
<tr>
<td>1,000,000</td>
<td>40.95%</td>
<td>54.92%</td>
</tr>
<tr>
<td>2,000,000</td>
<td>25.07%</td>
<td>54.28%</td>
</tr>
<tr>
<td>3,000,000</td>
<td>35.57%</td>
<td>56.22%</td>
</tr>
</tbody>
</table>
Table 3.3 indicates that there is not a strong enough correlation between the average daily trading volume and the test results to use average volume as a factor in selecting trades. Backtesting is valuable not only for how it finds ways to leverage a trading pattern, but also because it shows you factors that you do not need to consider. In the case of the bearish engulfing pattern, we have found that results are better when trading higher dollar stocks and that the average daily volume does not have a significant effect on results.

**FIRST DAY VERSUS SECOND DAY VOLUME**

The next filter tested for the bearish engulfing pattern is the volume on the day the bearish engulfing occurs. Does it matter if the second day of the pattern occurs on above average volume? An example of a high volume

**FIGURE 3.9:**
HIGH VOLUME BEARISH ENGULFING IN FDX ON 3/15/05

*Courtesy of AIQ*
The bearish engulfing pattern is shown in Figure 3.9 where the second day of the pattern is marked with an up arrow and the high volume on the day is marked by a down arrow.

In order to answer this question, I ran the backtest during the 12/31/04 to 04/28/05 period and added a filter describing the relationship of the volume on the second day of the pattern to the 21 day simple moving average of the volume. The results are shown in Table 3.4. The standard three day holding time was used for all positions.

The bearish engulfing pattern is looking to short an uptrending stock after a down day occurs that has a body whose range completely covers or engulfs the previous day’s range. One would think that taking trades when this down day occurs on large volume would be good since the large volume might also indicate that the down day (the second day of the pattern) was more important. The test results of Table 3.4 indicate that, at least for this test period, this is not the case.

<table>
<thead>
<tr>
<th>DAY 2 VOLUME RATIO</th>
<th>ANNUALIZED ROI</th>
<th>WINNING PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.6</td>
<td>21.29%</td>
<td>56.48%</td>
</tr>
<tr>
<td>0.8</td>
<td>17.88%</td>
<td>57.35%</td>
</tr>
<tr>
<td>1.0</td>
<td>19.79%</td>
<td>58.38%</td>
</tr>
<tr>
<td>1.2</td>
<td>12.25%</td>
<td>58.32%</td>
</tr>
<tr>
<td>1.4</td>
<td>19.59%</td>
<td>54.64%</td>
</tr>
<tr>
<td>1.6</td>
<td>48.80%</td>
<td>50.26%</td>
</tr>
</tbody>
</table>
There are many ideas that seem logical for trading patterns. Some of these work, many do not. This is why testing trading patterns before using them is important. It is much better to find out what really works instead of trading on beliefs and assumptions. The data in Table 3.4 indicates that, in general, above average volume on the second day of a bearish engulfing pattern hurts rather than helps results.

<table>
<thead>
<tr>
<th>DAY 2 VOLUME</th>
<th>ANNUALIZED ROI</th>
<th>WINNING PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Requirement, Standard Test</td>
<td>31.63%</td>
<td>58.36%</td>
</tr>
<tr>
<td>0.7 times Day One volume</td>
<td>42.81%</td>
<td>58.42%</td>
</tr>
<tr>
<td>0.9 times Day One volume</td>
<td>51.62%</td>
<td>58.91%</td>
</tr>
<tr>
<td>1.1 times Day One volume</td>
<td>51.81%</td>
<td>59.47%</td>
</tr>
<tr>
<td>1.2 times Day One volume</td>
<td>59.67%</td>
<td>61.17%</td>
</tr>
<tr>
<td>1.3 times Day One volume</td>
<td>65.86%</td>
<td>62.14%</td>
</tr>
<tr>
<td>1.4 times Day One volume</td>
<td>72.07%</td>
<td>63.34%</td>
</tr>
</tbody>
</table>

If instead of looking for a volume increase compared to the average daily volume, we simply look for larger volume on the second day of the bearish engulfing pattern than we had on the first day of the pattern, the results are much more promising. The data in Table 3.5 shows the results of running the backtest seven times during the period of 12/31/04 to 04/28/05 using a constant three day holding period for each test.

The first line in Table 3.5 shows the results of the standard bearish engulfing pattern during this test period. The second line adds a requirement to the
standard pattern that the volume on the second day of the pattern be at least 70% of the volume that occurred on the first day of the pattern. The third line in Table 3.5 shows the test results for the standard pattern with the additional requirement that the second day’s volume be at least 90% of the first day’s volume.

It is interesting to note that when the second day’s volume is at least 130% of the volume on the first day of the pattern, the annualized ROI in the tests doubles over that found when using the basic pattern. The relationship between the first day’s volume (the volume on the white bar up day) and the volume on the second day of the pattern (the black bar down day) is clearly important to results.

FIGURE 3.10:
UNH BEARISH ENGULFING, FIRST DAY OF PATTERN A RECENT HIGH

Courtesy of AIQ
Another suggestion by some traders is to only take bearish engulfing pattern trades when the first day of the pattern is a recent high in the stock. The idea here is that the bearish engulfing pattern would occur at recent highs. An example of this pattern is shown in Figure 3.10, which shows the bearish engulfing pattern that occurred in UNH on 04/08/05. UNH had been in a brief run up, and the first day of the bearish engulfing pattern occurred at the high for the run. The second day of the pattern marked the beginning of a retracement in UNH and trading this pattern would have been quite profitable.

**FIRST DAY AS A RECENT HIGH**

As noted before, traders need to be very careful when shown a few examples of a trading pattern that “works.” A few examples provide just enough

![Figure 3.11: Test results for first day of Pattern Being a Recent High](image)
information to get you into trouble. I am more interested in how the pattern has performed over several hundred or a thousand trades than in seeing just a few successful examples. Backtesting the bearish engulfing pattern with the requirement that the first day of the pattern be a recent high yields the results shown in Figure 3.11.

Figure 3.11 indicates that adding the requirement to the basic bearish engulfing pattern that the first day of the pattern also be a recent high as shown in Figure 3.10 reduces performance. The basic pattern performs better than the version with this additional requirement.

The entire bearish engulfing pattern testing to this point has focused on testing filters external to the pattern itself, such as price, volume, and the position of the pattern in the stock’s trend. Based on this testing, we have found that the bearish engulfing pattern works best when the general market, as measured by the NASDAQ, is in a downtrend and does not work well when the general market is uptrending or in a trading range. We have also found that the pattern works better on higher-priced stocks and with a holding period of three to four days.

AMOUNT OF OVERLAP

Now we will look at how slight variations in the bearish engulfing pattern itself affect trading results during the market downtrend of 12/31/04 to 04/28/05. The basic bearish engulfing pattern just requires that the second day’s black body overlap the first day’s white body—any amount of overlap is OK. The next test looks to see how the results are affected by requiring a larger overlap.

Figure 3.12 shows a bearish engulfing pattern that occurred in SNDA on 12/31/2004 and is noted by the up arrow in the chart. The top of the second day’s black body (marked by the up arrow) extends at least 15% of the day’s range above the top of the previous day’s body. In the basic bearish engulfing pattern definition, the second day’s body just needs to be above the top of the first day’s body. The new definition we are going to test requires that the top of the second day’s body be at least 15% of the day’s range higher than
the top of the body in the first day of the pattern, as illustrated by the SNDA pattern in Figure 3.12.

Figure 3.13 shows the test results during the 12/31/04 to 04/28/05 NASDAQ downtrend using the modified bearish engulfing pattern. This new requirement of “top overlap” improves both the annualized ROI and the percentage of winning trades.

“Bottom overlap” is the requirement that the bottom of the second day’s body extend at least 15% of the day’s range below the bottom of the first day’s body. Modifying the basic bearish engulfing pattern to require just bottom
FIGURE 3.13:
BEARISH ENGULFING TEST RESULTS
WITH “TOP OVERLAP”

 overlap does not improve results and in fact reduces the annualized ROI
when tested in the 12/31/04 to 04/28/05 NASDAQ downtrending market.

Based on this testing, it appears that a strong initial up move on the second
day of the pattern that then reverses—resulting in a down day—is more
beneficial to trading results than “bottom overlap.” I also tested whether a
long upper shadow on either day one or day two of the pattern affected the
backtesting results. Neither one improved the annualized ROI during the
test period.
COMBINING FILTERS

Table 3.6 summarizes the results of testing the bearish engulfing pattern. It is rarely advisable to just combine all the things that improve results, since this typically reduces the number of trades to a statistically insignificant number. However, one can sometimes combine a couple of filters and still have a significant number of trades and an improved trading pattern.

<table>
<thead>
<tr>
<th>FILTER</th>
<th>ANNUALIZED ROI</th>
<th>WINNING PERCENTAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Filter, Standard Test</td>
<td>31.63%</td>
<td>58.36%</td>
</tr>
<tr>
<td>Increasing Holding to 4 days</td>
<td>38.06%</td>
<td>59.13%</td>
</tr>
<tr>
<td>Requiring Close to Be &gt; $50</td>
<td>51.43%</td>
<td>63.24%</td>
</tr>
<tr>
<td>Average Volume &gt; 800K</td>
<td>34.39%</td>
<td>55.77%</td>
</tr>
<tr>
<td>Day 2 Volume &gt; average</td>
<td>19.79%</td>
<td>58.38%</td>
</tr>
<tr>
<td>Day 2 Volume 1.3 times Day 1</td>
<td>65.86%</td>
<td>62.14%</td>
</tr>
<tr>
<td>First Day Is Recent High</td>
<td>24.47%</td>
<td>57.36%</td>
</tr>
<tr>
<td>Upper Body Overlap</td>
<td>40.35%</td>
<td>60.41%</td>
</tr>
</tbody>
</table>
Combining the best two filters from Table 3.6 would seem logical, but let’s test it. The sixth filter shown in Table 3.6 required the volume on the second day of the bearish engulfing pattern to be at least 1.3 times the volume of the first day of the pattern. Using this filter with the basic bearish engulfing pattern resulted in an annualized ROI of 65%. The third filter shown in Table 3.6 required the stock to have a price more than $50. Using only this filter resulted in an annualized ROI of 51%. Combining these two filters resulted in an annualized ROI of 48%, as shown in Figure 3.14. Combining two strong filters actually reduced the annualized ROI.

Filters interact in ways that are not obvious, and traders need to test combinations of filters just as they test individual filters to determine which ones are the best to use. At this point we have determined that the bearish engulfing trading pattern works best when used in periods when the NASDAQ is in a downtrend and when selecting patterns that have volume
on the second day greater than 1.3 times the volume on the first day. The next step in testing the pattern is to verify that this filter is also beneficial during other downtrending periods in the NASDAQ.

Table 3.7 shows the test results for the basic bearish engulfing pattern and the pattern with the additional requirement that the volume on the second day of the pattern be at least 1.3 times the volume of the first day. Note that during each of the periods shown in Table 3.7, the market was in a downtrend and a buy and hold strategy would have lost significant money.

The results shown in Table 3.7 are interesting in that during four different market downtrends, the basic bearish engulfing trading pattern was a profitable trading system when the market moved down. It also shows that in each of those periods, adding the volume filter improved the trading results.

<table>
<thead>
<tr>
<th>MARKET DOWNTREND PERIOD</th>
<th>ROI STANDARD PATTERN</th>
<th>ROI WITH FILTER</th>
</tr>
</thead>
<tbody>
<tr>
<td>05/05/06 to 07/20/06</td>
<td>126.49</td>
<td>170.87</td>
</tr>
<tr>
<td>03/08/05 to 04/20/05</td>
<td>62.25</td>
<td>79.40</td>
</tr>
<tr>
<td>07/02/04 to 08/13/04</td>
<td>73.98</td>
<td>81.30</td>
</tr>
<tr>
<td>01/26/04 to 03/24/04</td>
<td>51.74</td>
<td>81.38</td>
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</tbody>
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FINAL RESULTS—HOW TO TRADE THE BEARISH ENGULFING

After examining thousands of bearish engulfing patterns in different market conditions and using various filters, the test results presented here indicate that the results of the bearish engulfing pattern may be improved by: using it in downtrending or bearish markets, using a three to five day holding period, using it on higher-priced stocks, looking for volume on the second day of the pattern that is larger than the volume on the first day of the pattern, and taking patterns when the top of the second day’s body is at least 15% of the day’s range above the top of the first day’s body.

The test results also indicate that results may be diminished using the bearish engulfing pattern in the following conditions: when the NASDAQ is uptrending or bullish, holding positions more than six days, patterns with above average volume on the second day, when the first day of the pattern is a recent high, patterns where the bottom of the second day’s body is more than 15% below the bottom of the first day’s body.

The improved Bearish Engulfing pattern requirements are:

- The stock must be in an uptrend.
- The NASDAQ must be in a downtrend.
- The first day of the pattern shows a white body.
- The second day of the pattern shows a black body that overlaps the first day’s body.
- The second day volume is at least 30% above the first day’s volume.