

Going Against the Trend: Do Countertrend Strategies Payoff?



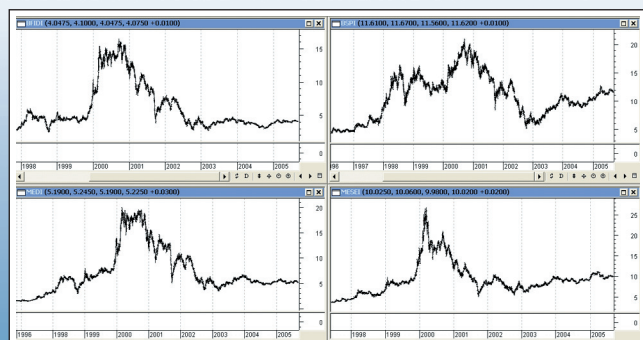
After a good deal of development and testing, traders sooner or later realize that in general it is better to try to design high profitability systems than to trade the long side only. The difficulty in coming up with high profitability systems that trade the short side as well has been attributed by some to the fact that bull markets are dominated by technical trading, while bear markets are less technically driven and often involve decisions based on fear and panic.

■ During the rapid decline of the equity markets in USA and Europe in the beginning of this decade, traders became even more worried about the future performance of their systems, because most of the back-testing was performed on data with upward trending prices. Many abandoned trading, fearing increased future losses, while others switched markets or went back to the drawing board.

The issue raised then was that of contrarian trading signals. Specifically, is it advisable to open long positions in declining markets and short positions in rising markets? Furthermore, is it recommended to filter out signals that go against the intermediate or longer-term trend?

It is impossible to provide a general answer to the above questions to cover all markets and trading systems. However, the examples in

F1) Italian Stocks



Historical daily prices of four Italian stocks.

Source: Metastock

this article demonstrate that some specific types of contrarian signals may not always contribute to trading system performance deterioration. Under some circumstances, these contrarian signals may even turn out to be highly profitable, against all expectations.

Price Patterns for Italian Equities

For the purpose of this study we will concentrate on short-term trading systems based on price patterns of the following general structure:

If long price pattern formation then

- Buy tomorrow on the open with
- Profit target price at Entry Price x (1+T/100)
- Stop-loss price at Entry Price x (1 - S/100)

If short price pattern formation then

- Sell tomorrow on the open with
- Profit target price at Entry Price x (1-T/100)
- Stop-loss price at Entry Price x (1 + S/100)

where T and S are the profit target and stop-loss values, respectively, expressed as percentages.

Furthermore, for the purpose of this study, we will consider price patterns formed in the price history of four issues trading in the Italian stock market. Specifically, B Fideuram (BFIDI), San Paolo IMI (BSPI),

F3) Metastock Code

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{File:MEDI.TXT Index:8 Index Date:20050215 PL:70.00% PS:30.00% Trades:30
CL:2}

{LONG , %, TARGET : 5 , STOP : 5 , ENTRY PRICE : OPEN , DELAY : 1 }

(Ref(c,0) > Ref(c,-1)) AND (Ref(c,-1) > Ref(o,0)) AND (Ref(o,0) > Ref(o,-1)) AND
(Ref(o,-1) > Ref(c,-2)) AND (Ref(c,-2) > Ref(o,-2))
    
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Metastock formula code for a long price pattern for MEDI.

Source: APS Automatic Pattern Search

F2) Price Pattern Search Results

Last Results - 15 patterns found												
File Name	Index	Index Date	Trade on	PL	PS	Trades	CL	Type	Target	Stop	C	Last Date
BFIDI.TXT	3	20050811	Open	70.59	29.41	34	2	LONG	5	5	%	20050831
BFIDI.TXT	8	20050621	Open	30.00	70.00	30	2	SHORT	5	5	%	20050831
BFIDI.TXT	10	20050711	Open	70.27	29.73	37	2	LONG	5	5	%	20050831
BSPI.TXT	6	20050505	Open	73.33	26.67	30	2	LONG	5	5	%	20050831
BSPI.TXT	6	20041005	Open	32.50	67.50	40	2	SHORT	5	5	%	20050831
BSPI.TXT	12	20050315	Open	67.65	32.35	34	3	LONG	5	5	%	20050831
MEDI.TXT	8	20050215	Open	70.00	30.00	30	2	LONG	5	5	%	20050831
MEDI.TXT	1	20050316	Open	27.27	72.73	33	1	SHORT	5	5	%	20050831
MEDI.TXT	5	20050830	Open	29.03	70.97	31	2	SHORT	5	5	%	20050831
MEDI.TXT	12	20040928	Open	29.55	70.45	44	3	SHORT	5	5	%	20050831
MEDI.TXT	3	20050729	Open	31.43	68.57	35	3	SHORT	5	5	%	20050831
MEDI.TXT	6	20050415	Open	31.03	68.97	29	3	SHORT	5	5	%	20050831
MESEI.TXT	6	20050713	Open	70.97	29.03	31	2	LONG	5	5	%	20050831
MESEI.TXT	4	20050825	Open	32.14	67.86	28	1	SHORT	5	5	%	20050831
MESEI.TXT	10	20050131	Open	72.41	27.59	29	2	LONG	5	5	%	20050831

Trade on designates whether the trade entry executed on the open or close. **PL** is the percent profitability of patterns suitable for long positions. In this case $PS = 100 - PL$. **PS** is the percent profitability of patterns suitable for short positions. In this case $PL = 100 - PS$. **Trades** is the number of trades. **CL** is the number of maximum consecutive losers. **Type** is either Long or short. **Target** shows the profit target value used in the search. **Stop** shows the stop-loss value used in the search. **C** indicates the type of profit target and stop-loss; “%” stands for percentages of entry price.

Source: APS Automatic Pattern Search

Mediaset (MESEI) and Mediolanum (MEDI) are the four stocks under consideration and their price histories are shown in figure 1. It is clear from figure 1 that all four stocks were in a bull market until the end of 2000, which was followed by a bear market that lasted for almost two years. Since then, two of these stocks have traded sideways in a channel (BFIDI, MEDI) and the remaining two are in an uptrend (MESEI, BSPI).

F4) Metastock Back-Testing Results

System Report (Points Only Test) – MEDI

Item	Value	Item	Value
Total net profit	1.3845	Open position Value	N/A
Buy/Hold profit	-7.9350	Days in test	1703
Total closed trades	12	Commissions paid	0.0000
Avg profit per trade	0.1154	Avg Win/ Avg Loss ratio	0.96
Total long trades	12	Total short trades	0
Winning long trades	8	Winning short trades	0
Total winning trades	8	Total losing trades	4
Amount of winning trades	2.8785	Amount of losing trades	-1.4940
Average win	0.3598	Average loss	-0.3735
Largest win	0.6200	Largest loss	-0.5420
Average length of win	5.50	Average length of loss	4.75
Longest winning trade	18	Longest losing trade	12
Most consecutive wins	3	Most consecutive losses	2
Total bars out	1144	Average length out	88.00
Longest out period	332		
System close drawdown	-0.0535	Profit/Loss index	48.10
System open drawdown	-0.0535	Reward/Risk index	96.28
Max open trade drawdown	-0.1900	Buy/Hold index	117.45

Back-testing results of a long MEDI price pattern in a declining market.

Source: Metastock

Also, for the purpose of this study, APS Automatic Pattern Search was used [Reference 1]. APS is a software program that discovers automatically price patterns that fulfill user-defined performance criteria. The regular search option of the program was used in the search for patterns (instead of the extended search option, which produces many more patterns but takes much longer to complete). The following search criteria were specified for each of the four stocks considered in the study:

Minimum profitability = 66%

Minimum number of historical trades, N = 27

Maximum consecutive losers, CL < 4

Profit target = Stop-loss = 5% of entry price

The search results generated by APS Automatic Pattern Search are shown in figure 2. A total of 15 price patterns were discovered for the four stocks in figure 1. The number of long and short patterns for each stock in the search results is shown in table 1. Each row in the results in figure 2 represents a price pattern with its performance parameters listed, along with other useful information.

T1) Long and Short Price Patterns

Symbol	Long Patterns	Short Patterns
BFIDI	2	1
BSPI	2	1
MEDI	1	5
MESEI	2	1

Number of Long and Short price patterns discovered by APS.

Long versus Short

We next consider the first long price pattern in the results of figure 2 for MEDI. This pattern has 30 historical trades at a 70% profitability (ratio of winning trades to total trades). APS generated the Metastock formula code for this price pattern as shown in figure 3.

The code generated by APS was used in Metastock tester to back-test the performance of this long price pattern during the bear market that started around 2001. The results are shown in figure 4. Out of 12 trades in this testing period, 8 were winning, resulting in a profitability of 66.67%. Thus, the performance of this long pattern during the declining market was satisfactory. Furthermore, the profit factor was

F5) Metastock Code

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{File:MEDI.D.TXT Index:3 Index Date:20050729 PL:31.43% PS:68.57% Trades:35
CL:3}

{SHORT ,%, TARGET : 5 , STOP : 5 , ENTRY PRICE : OPEN , DELAY : 1 }

(Ref[h,-1] > Ref[h,-2]) AND (Ref[h,-2] > Ref[h,0]) AND (Ref[h,0] > Ref[l,-1]) AND (Ref[l,-1]
> Ref[l,-2]) AND (Ref[l,-2] > Ref[l,0])
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Metastock formula code for a short price pattern for MEDI.

Source: APS Automatic Pattern Search

F7) Metastock Code

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{File:BSPI.D.TXT Index:6 Index Date:20050505 PL:73.33% PS:26.67% Trades:30 CL:2}

{LONG ,%, TARGET : 5 , STOP : 5 , ENTRY PRICE : OPEN , DELAY : 1 }

(Ref[c,-2] > Ref[c,-3]) AND (Ref[c,-3] > Ref[c,-1]) AND (Ref[c,-1] > Ref[c,0]) AND
(Ref[c,0] > Ref[c,-4])
```

Metastock formula code for a long price pattern for BSPI.

Source: APS Automatic Pattern Search

F6) Metastock Back-Testing Results

System Report (Points Only Test) – MEDI

Item	Value	Item	Value
Total net profit	3.3633	Open position Value	N/A
Buy/Hold profit	12.1034	Days in test	1521
Total closed trades	19	Commissions paid	0.0000
Avg profit per trade	0.1770	Avg Win/ Avg Loss ratio	1.26
Total long trades	0	Total short trades	19
Winning long trades	0	Winning short trades	12
Total winning trades	12	Total losing trades	7
Amount of winning trades	6.2483	Amount of losing trades	-2.8850
Average win	0.5207	Average loss	-0.4121
Largest win	0.9220	Largest loss	-0.8825
Average length of win	6.17	Average length of loss	7.29
Longest winning trade	16	Longest losing trade	32
Most consecutive wins	5	Most consecutive losses	3
Total bars out	963	Average length out	48.15
Longest out period	180		
System close drawdown	-0.4519	Profit/Loss index	53.83
System open drawdown	-0.5423	Reward/Risk index	86.11
Max open trade drawdown	-0.7400	Buy/Hold index	-72.21

Back-testing results of a short MEDI price pattern in a rising market.

Source: Metastock

F8) Metastock Back-Testing Results

System Report (Points Only Test) – BSPI

Item	Value	Item	Value
Total net profit	1.4050	Open position Value	N/A
Buy/Hold profit	-10.6200	Days in test	728
Total closed trades	6	Commissions paid	0.0000
Avg profit per trade	0.2342	Avg Win/ Avg Loss ratio	0.95
Total long trades	6	Total short trades	0
Winning long trades	4	Winning short trades	0
Total winning trades	4	Total losing trades	2
Amount of winning trades	2.9730	Amount of losing trades	-1.5680
Average win	0.7433	Average loss	-0.7840
Largest win	0.8965	Largest loss	-0.8055
Average length of win	4.75	Average length of loss	7.00
Longest winning trade	6	Longest losing trade	12
Most consecutive wins	2	Most consecutive losses	1
Total bars out	482	Average length out	68.86
Longest out period	297		
System close drawdown	0.0000	Profit/Loss index	47.26
System open drawdown	-0.0160	Reward/Risk index	98.87
Max open trade drawdown	-0.4600	Buy/Hold index	113.23

Back-testing results of a long BSPI price pattern in a declining market.

Source: Metastock