TRADING SECRETS

of

the

INNER CIRCLE

by

ANDREW GOODWIN

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Chapter 1

Market Wizard Filter

This chapter will detail a sophisticated method using interest rate and market breadth models to filter a simple S&P oscillator system. This use of intermarket data can be very useful in your timing operations if used judiciously. In fact, one S&P trader, profiled in Schwager's *"Market Wizards"* uses a version of the filter I am giving you to assist in his highly profitable trading operations.

First things first:

Basic Method of calculating the RSI index:

The formula for RSI:

$$RSI = 100 - (100/1 + RS)$$

Where

RS= Average of x day's up close to close changes/average of x day's down close to close changes.

For 8 day RSI you will be averaging the close to close changes of the last 8 up days. Then you will divide this figure by the average close to close changes of the last 8 down days.

dealing with a poor system is a W/L ratio worse than the .70 and intraday drawdown nearly half as large as the net profit.

Why the basic 8 day RSI system fails:

By themselves, oscillator systems are extremely dangerous if used in the traditional way. Buying when an oscillator such as stochastics or RSI turns up from oversold can bankrupt you during a landslide decline. Nothing in the oscillator system will provide you with an exit from your trade except a turndown from the overbought area by the oscillator. If the oscillator goes down after your buy and does rally enough to make the oscillator go above the sell line, you may lose a tremendous sum.

Filtered 8 day RSI system:

The process of transforming the 8 day RSI system from lemon into a gem involves filtering with internal and intermarket models. What we will do is tell the system that it may only enter into the stock index futures contracts when conditions for an advance are most favorable. Furthermore, if the conditions that led us to enter the market deteriorate, then we build in a mechanism for exiting the trade. We can exit before RSI crosses below the sell line when danger approaches. Now I will give you two ways to do this including the *"Market Wizard"* method.

Market Breadth Filtered 8 day RSI:

Rules:

1) Calculate the 10 day simple moving average of the number of advancing issues on the NYSE. This number is available from most quote services, brokers and financial television tickers. A ten day moving average is calculated by adding the last ten days of advances and dividing this sum by 10.

2) Calculate the 10 day simple moving average of the number of declining issues on the NYSE. Follow the same procedure that you did to calculate the 10 day moving average of advances.

3) Divide the 10 day average of advances by the 10 day average of declines.

4) If the value of the division is greater than .75 or 75% then our market breadth filter is considered positive.

5) If the value of the division is less than .50 then our market breadth filter is considered negative.

6) If the breadth filter is positive then buy the S&P 500 contracts on the close of the day when the 8 day RSI crosses from below to above 30.

7) Exit your long position if the 8 day RSI crosses from above to below 65.

8) Also exit your long position if the market breadth filter changes from positive to negative.

Results and discussion of the Breadth Filtered 8 day RSI

This system adds a trend filter designed to get us out of the trade if market breadth deteriorates while we are in the trade, but the 8 day RSI fails to provide us with an exit. This technological advance allows us to get out of bad trades more quickly than we would if we were trading the 8 day RSI system. Profit factor rises to 4.55 from the 3.29 of the basic system. Our net profit increases by $28,000 and our maximum drawdown shrinks by nearly 65%. This system clearly improves the result of the basic system and gives us a safer way to trade. However, the W/L ratio is still too low at .71. So let us move to the *"Market Wizard"* version.

Treasury Note and Treasury Bill Filtered 8 day RSI:

These filters were adapted from a concept discussed by the great S&P trader, Marly Schwartz who was interviewed in the trading book "Market Wizards." Schwartz suggests trading S&P futures when both bonds and short paper are above their moving averages. This model draws on Schwartz's concept, but we have added our own twist.

Rules:
1) Each Friday, record the close of the CBOT's ten-year note future. When the Friday close of the ten-year note is greater than its 40 week moving average then the note filter is positive. If Friday is a holiday, use whatever close is the last close of the trading week.

2) Each Friday, record the close of the Treasury bill future. When Friday's closing T'bill future price is greater than its 40 week moving average, then the short paper filter is positive.

3) If the note filter and the bill filter are both positive then the interest rate component is positive.

4) If the note filter and the bill filter are both negative then the interest rate composite is negative.

5) If either the note filter or the bill filter is positive while the other is negative, the last reading of the interest rate composite stays the same. A change in the reading is only possible if both the note and the bill filter are above or below their moving averages simultaneously at Friday's close.

6) If the interest rate composite is bullish, buy on the close of the day when the 8 day RSI crosses from below to above the 40 buy line.

7) Exit your long trade if the 8 day RSI crosses from above to below the 75 sell line.

8) Exit your long trade if the interest rate composite changes from positive to negative even if RSI has not given an exit signal yet.

Discussion and Results of Market Wizard RSI system:

This version of the 8 day RSI system permits us to trade only when monetary conditions are favorable for stocks. When both short interest rates and intermediate interest

rates are declining, the monetary environment should normally be favorable for stocks, We only will trade the S&P futures when we have the interest rate climate on our side. Notice how with such an excellent filter as positive monetary conditions, we can change our RSI parameters to make buying easier and selling harder. This allows us to capture more dollars during favorable periods while avoiding risk when the monetary climate is stacked against us. In fact over $200,000 in profits have been collected with this trade.

If the bill and note markets deteriorate while we are in a trade, we simply exit the trade and wait for the next signal. This system has one of the best track records of any S&P oscillator system that you are likely to see. With an 8.19 profit factor, 82% accuracy, and a largest losing trade of less than $7,700, we have a great system. Add in the fact that the system sports a 1.82 W/L ratio and you have the ingredients of a true *"Market Wizard"* model.

Chapter1 Basic 3 day CCSP99A-Daily   04/01/82 - 03/31/97

Performance Summary: All Trades

Total net profit	$ 140180.00	Open position P/L	$ 0.00
Gross profit	$ 201350.00	Gross loss	$ -61170.00
Total # of trades	50	Percent profitable	86%
Number winning trades	43	Number losing trades	7
Largest winning trade	$ 16525.00	Largest losing trade	$ -35325.00
Average winning trade	$ 4682.56	Average losing trade	$ -8738.57
Ratio avg win/avg loss	0.54	Avg trade(win & loss)	$ 2803.60
Max consec. winners	13	Max consec. losers	2
Avg # bars in winners	21	Avg # bars in losers	46
Max intraday drawdown	$ -67325.00		
Profit factor	3.29	Max # contracts held	1
Account size required	$ 67325.00	Return on account	208%

Performance Summary: Long Trades

Total net profit	$ 140180.00	Open position P/L	$ 0.00
Gross profit	$ 201350.00	Gross loss	$ -61170.00
Total # of trades	50	Percent profitable	86%
Number winning trades	43	Number losing trades	7
Largest winning trade	$ 16525.00	Largest losing trade	$ -35325.00
Average winning trade	$ 4682.56	Average losing trade	$ -8738.57
Ratio avg win/avg loss	0.54	Avg trade(win & loss)	$ 2803.60
Max consec. winners	13	Max consec. losers	2
Avg # bars in winners	21	Avg # bars in losers	46
Max intraday drawdown	$ -67325.00		
Profit factor	3.29	Max # contracts held	1
Account size required	$ 67325.00	Return on account	208%

Performance Summary: Short Trades

Total net profit	$ 0.00	Open position P/L	$ 0.00
Gross profit	$ 0.00	Gross loss	$ 0.00
Total # of trades	0	Percent profitable	0%
Number winning trades	0	Number losing trades	0
Largest winning trade	$ 0.00	Largest losing trade	$ 0.00
Average winning trade	$ 0.00	Average losing trade	$ 0.00
Ratio avg win/avg loss	100.00	Avg trade(win & loss)	$ 0.00
Max consec. winners	0	Max consec. losers	0
Avg # bars in winners	0	Avg # bars in losers	0
Max intraday drawdown	$ 0.00		
Profit factor	100.00	Max # contracts held	0
Account size required	$ 0.00	Return on account	0%

```
Chapter1 Basic 8 day  CCSP99A-Daily  04/01/82 - 03/31/97
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Date	Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
07/01/82		Buy	1	221.900			
07/19/82		LExit	1	224.500		$ 1225.00	$ 1225.00
08/02/82		Buy	1	222.050			
09/01/82		LExit	1	229.050		$ 3425.00	$ 4650.00
08/03/83		Buy	1	274.400			
09/09/83		LExit	1	277.100		$ 1275.00	$ 5925.00
11/02/83		Buy	1	274.580			
01/10/84		LExit	1	275.000		$ 135.00	$ 6060.00
01/31/84		Buy	1	270.500			
05/03/84		LExit	1	263.660		$ -3495.00	$ 2565.00
06/01/84		Buy	1	255.010			
08/15/84		LExit	1	262.840		$ 3840.00	$ 6405.00
10/04/84		Buy	1	260.960			
10/22/84		LExit	1	265.660		$ 2275.00	$ 8680.00
11/20/84		Buy	1	260.110			
12/19/84		LExit	1	261.810		$ 775.00	$ 9455.00
01/07/85		Buy	1	256.170			
01/17/85		LExit	1	261.720		$ 2700.00	$ 12155.00
03/19/85		Buy	1	267.650			
05/28/85		LExit	1	272.000		$ 2100.00	$ 14255.00
07/30/85		Buy	1	273.060			
10/15/85		LExit	1	267.460		$ -2875.00	$ 11380.00
01/23/86		Buy	1	282.660			
02/04/86		LExit	1	291.710		$ 4450.00	$ 15830.00
04/08/86		Buy	1	309.750			
04/18/86		LExit	1	317.450		$ 3775.00	$ 19605.00
05/19/86		Buy	1	306.950			
06/02/86		LExit	1	319.200		$ 6050.00	$ 25655.00
07/18/86		Buy	1	310.600			
09/02/86		LExit	1	321.700		$ 5475.00	$ 31130.00
09/19/86		Buy	1	305.960			
11/13/86		LExit	1	317.010		$ 5450.00	$ 36580.00
01/02/87		Buy	1	323.190			
01/23/87		LExit	1	345.740		$ 11200.00	$ 47780.00
03/31/87		Buy	1	362.090			
06/10/87		LExit	1	368.090		$ 2925.00	$ 50705.00
09/10/87		Buy	1	365.640			
10/05/87		LExit	1	396.340		$ 5275.00	$ 55980.00
10/13/87		Buy	1	381.190			
12/28/87		LExit	1	310.690		$ -35325.00	$ 20655.00
03/28/88		Buy	1	322.640			
04/14/88		LExit	1	321.140		$ -825.00	$ 19830.00
05/12/88		Buy	1	316.540			
06/16/88		LExit	1	332.940		$ 8125.00	$ 27955.00
07/25/88		Buy	1	325.690			
09/15/88		LExit	1	328.640		$ 1400.00	$ 29355.00
11/21/88		Buy	1	325.390			
12/09/88		LExit	1	335.790		$ 5125.00	$ 34480.00
02/27/89		Buy	1	343.550			
03/17/89		LExit	1	345.850		$ 1075.00	$ 35555.00
10/16/89		Buy	1	381.210			
11/28/89		LExit	1	383.260		$ 950.00	$ 36505.00
01/16/90		Buy	1	376.740			
03/07/90		LExit	1	371.590		$ -2650.00	$ 33855.00
04/25/90		Buy	1	364.990			
05/25/90		LExit	1	386.090		$ 10475.00	$ 44330.00
08/09/90		Buy	1	366.940			
11/13/90		LExit	1	341.790		$ -12650.00	$ 31680.00
01/10/91		Buy	1	337.940			
01/22/91		LExit	1	351.790		$ 6850.00	$ 38530.00
08/20/91		Buy	1	398.950			
08/30/91		LExit	1	414.000		$ 7450.00	$ 45980.00
09/12/91		Buy	1	406.150			
10/21/91		LExit	1	407.950		$ 825.00	$ 46805.00

Chapter1 Basic 8 day   CCSP99A-Daily   04/01/82 - 03/31/97

Date	Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
11/18/91		Buy	1	401.700			
01/20/92		LExit	1	431.350		$ 14750.00	$ 61555.00
03/09/92		Buy	1	419.400			
04/20/92		LExit	1	423.750		$ 2100.00	$ 63655.00
06/11/92		Buy	1	422.150			
07/02/92		LExit	1	424.250		$ 975.00	$ 64630.00
08/26/92		Buy	1	425.450			
09/15/92		LExit	1	431.950		$ 3175.00	$ 67805.00
10/08/92		Buy	1	419.850			
10/30/92		LExit	1	429.800		$ 4900.00	$ 72705.00
01/11/93		Buy	1	442.550			
01/26/93		LExit	1	451.350		$ 4325.00	$ 77030.00
02/19/93		Buy	1	446.650			
03/04/93		LExit	1	458.800		$ 6000.00	$ 83030.00
04/27/93		Buy	1	448.700			
05/21/93		LExit	1	456.700		$ 3925.00	$ 86955.00
09/22/93		Buy	1	466.950			
10/19/93		LExit	1	475.650		$ 4275.00	$ 91230.00
11/05/93		Buy	1	468.900			
12/07/93		LExit	1	475.950		$ 3450.00	$ 94680.00
03/28/94		Buy	1	468.100			
05/20/94		LExit	1	461.550		$ -3350.00	$ 91330.00
06/27/94		Buy	1	454.700			
07/19/94		LExit	1	460.300		$ 2725.00	$ 94055.00
10/07/94		Buy	1	460.200			
10/18/94		LExit	1	472.050		$ 5850.00	$ 99905.00
11/25/94		Buy	1	457.200			
12/22/94		LExit	1	463.550		$ 3100.00	$ 103005.00
01/11/96		Buy	1	586.400			
01/25/96		LExit	1	599.750		$ 6600.00	$ 109605.00
04/12/96		Buy	1	615.250			
05/28/96		LExit	1	648.450		$ 16525.00	$ 126130.00
07/09/96		Buy	1	628.000			
08/05/96		LExit	1	630.550		$ 1200.00	$ 127330.00
12/17/96		Buy	1	689.150			
12/30/96		LExit	1	715.000		$ 12850.00	$ 140180.00

```
Type         : System
Name         : Chapter1 Basic 8 day
Notes        :

Last Update : 08/26/97 03:24pm
Printed on  : 08/26/97 03:27pm
Verified    : YES
```

```
If rsi(close,8) crosses above 30 then buy on close;
if rsi(close,8) crosses below 65 then exitlong on close;
```

(Basic 8 Day RSI System Code)

Chapter1 A/D Filter   CCSP99A-Daily   04/01/82 - 03/31/97

Performance Summary: All Trades

Total net profit	$ 168465.00	Open position P/L	$ 0.00
Gross profit	$ 215860.00	Gross loss	$ -47395.00
Total # of trades	52	Percent profitable	87%
Number winning trades	45	Number losing trades	7
Largest winning trade	$ 16525.00	Largest losing trade	$ -17650.00
Average winning trade	$ 4796.89	Average losing trade	$ -6770.71
Ratio avg win/avg loss	0.71	Avg trade(win & loss)	$ 3239.71
Max consec. winners	14	Max consec. losers	1
Avg # bars in winners	21	Avg # bars in losers	26
Max intraday drawdown	$ -25500.00		
Profit factor	4.55	Max # contracts held	1
Account size required	$ 25500.00	Return on account	661%

Performance Summary: Long Trades

Total net profit	$ 168465.00	Open position P/L	$ 0.00
Gross profit	$ 215860.00	Gross loss	$ -47395.00
Total # of trades	52	Percent profitable	87%
Number winning trades	45	Number losing trades	7
Largest winning trade	$ 16525.00	Largest losing trade	$ -17650.00
Average winning trade	$ 4796.89	Average losing trade	$ -6770.71
Ratio avg win/avg loss	0.71	Avg trade(win & loss)	$ 3239.71
Max consec. winners	14	Max consec. losers	1
Avg # bars in winners	21	Avg # bars in losers	26
Max intraday drawdown	$ -25500.00		
Profit factor	4.55	Max # contracts held	1
Account size required	$ 25500.00	Return on account	661%

Performance Summary: Short Trades

Total net profit	$ 0.00	Open position P/L	$ 0.00
Gross profit	$ 0.00	Gross loss	$ 0.00
Total # of trades	0	Percent profitable	0%
Number winning trades	0	Number losing trades	0
Largest winning trade	$ 0.00	Largest losing trade	$ 0.00
Average winning trade	$ 0.00	Average losing trade	$ 0.00
Ratio avg win/avg loss	100.00	Avg trade(win & loss)	$ 0.00
Max consec. winners	0	Max consec. losers	0
Avg # bars in winners	0	Avg # bars in losers	0
Max intraday drawdown	$ 0.00		
Profit factor	100.00	Max # contracts held	0
Account size required	$ 0.00	Return on account	0%

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Chapter1 A/D Filter  CCSP99A-Daily  04/01/82 - 03/31/97
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Date	Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
07/01/82		Buy	1	221.900			
07/19/82		LExit	1	224.500		$ 1225.00	$ 1225.00
08/02/82		Buy	1	222.050			
09/01/82		LExit	1	229.050		$ 3425.00	$ 4650.00
08/03/83		Buy	1	274.400			
09/09/83		LExit	1	277.100		$ 1275.00	$ 5925.00
11/02/83		Buy	1	274.580			
01/10/84		LExit	1	275.000		$ 135.00	$ 6060.00
01/31/84		Buy	1	270.500			
05/03/84		LExit	1	263.660		$ -3495.00	$ 2565.00
06/18/84		Buy	1	253.140			
08/15/84		LExit	1	262.840		$ 4775.00	$ 7340.00
10/04/84		Buy	1	260.960			
10/22/84		LExit	1	265.660		$ 2275.00	$ 9615.00
11/20/84		Buy	1	260.110			
12/19/84		LExit	1	261.810		$ 775.00	$ 10390.00
01/07/85		Buy	1	256.170			
01/17/85		LExit	1	261.720		$ 2700.00	$ 13090.00
03/19/85		Buy	1	267.650			
05/28/85		LExit	1	272.000		$ 2100.00	$ 15190.00
07/30/85		Buy	1	273.060			
10/15/85		LExit	1	267.460		$ -2875.00	$ 12315.00
01/23/86		Buy	1	282.660			
02/04/86		LExit	1	291.710		$ 4450.00	$ 16765.00
04/08/86		Buy	1	309.750			
04/18/86		LExit	1	317.450		$ 3775.00	$ 20540.00
05/19/86		Buy	1	306.950			
06/02/86		LExit	1	319.200		$ 6050.00	$ 26590.00
07/18/86		Buy	1	310.600			
09/02/86		LExit	1	321.700		$ 5475.00	$ 32065.00
09/19/86		Buy	1	305.960			
11/13/86		LExit	1	317.010		$ 5450.00	$ 37515.00
01/02/87		Buy	1	323.190			
01/23/87		LExit	1	345.740		$ 11200.00	$ 48715.00
03/31/87		Buy	1	362.090			
06/10/87		LExit	1	368.090		$ 2925.00	$ 51640.00
09/10/87		Buy	1	385.640			
10/05/87		LExit	1	396.340		$ 5275.00	$ 56915.00
10/13/87		Buy	1	381.190			
10/15/87		LExit	1	363.790		$ -8775.00	$ 48140.00
12/04/87		Buy	1	291.090			
12/28/87		LExit	1	310.690		$ 9725.00	$ 57865.00
03/28/88		Buy	1	322.640			
04/14/88		LExit	1	321.140		$ -825.00	$ 57040.00
05/12/88		Buy	1	316.540			
06/16/88		LExit	1	332.940		$ 8125.00	$ 65165.00
07/25/88		Buy	1	325.690			
09/15/88		LExit	1	328.640		$ 1400.00	$ 66565.00
11/21/88		Buy	1	325.390			
12/09/88		LExit	1	335.790		$ 5125.00	$ 71690.00
02/27/89		Buy	1	343.550			
03/17/89		LExit	1	345.850		$ 1075.00	$ 72765.00
10/16/89		Buy	1	381.210			
11/28/89		LExit	1	383.260		$ 950.00	$ 73715.00
01/16/90		Buy	1	376.740			
03/07/90		LExit	1	371.590		$ -2650.00	$ 71065.00
04/25/90		Buy	1	364.990			
05/25/90		LExit	1	386.090		$ 10475.00	$ 81540.00
08/09/90		Buy	1	366.940			
08/23/90		LExit	1	331.790		$ -17650.00	$ 63890.00
09/25/90		Buy	1	333.940			
11/13/90		LExit	1	341.790		$ 3850.00	$ 67740.00
01/10/91		Buy	1	337.940			
01/22/91		LExit	1	351.790		$ 6850.00	$ 74590.00

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Chapter1 A/D Filter  CCSP99A-Daily   04/01/82 - 03/31/97
Date      Time    Type  Cnts    Price  Signal Name      Entry P/L  Cumulative
08/20/91          Buy    1     398.950
08/30/91          LExit  1     414.000              $    7450.00 $  82040.00
09/12/91          Buy    1     406.150
10/21/91          LExit  1     407.950              $     825.00 $  82865.00
11/18/91          Buy    1     401.700
01/20/92          LExit  1     431.350              $   14750.00 $  97615.00
03/09/92          Buy    1     419.400
04/20/92          LExit  1     423.750              $    2100.00 $  99715.00
06/11/92          Buy    1     422.150
07/02/92          LExit  1     424.250              $     975.00 $ 100690.00
08/26/92          Buy    1     425.450
09/15/92          LExit  1     431.950              $    3175.00 $ 103865.00
10/08/92          Buy    1     419.850
10/30/92          LExit  1     429.800              $    4900.00 $ 108765.00
01/11/93          Buy    1     442.550
01/26/93          LExit  1     451.350              $    4325.00 $ 113090.00
02/19/93          Buy    1     446.650
03/04/93          LExit  1     458.800              $    6000.00 $ 119090.00
04/27/93          Buy    1     448.700
05/21/93          LExit  1     456.700              $    3925.00 $ 123015.00
09/22/93          Buy    1     466.950
10/19/93          LExit  1     475.650              $    4275.00 $ 127290.00
11/05/93          Buy    1     468.900
12/07/93          LExit  1     475.950              $    3450.00 $ 130740.00
03/28/94          Buy    1     468.100
04/04/94          LExit  1     446.000              $  -11125.00 $ 119615.00
06/27/94          Buy    1     454.700
07/19/94          LExit  1     460.300              $    2725.00 $ 122340.00
10/07/94          Buy    1     460.200
10/18/94          LExit  1     472.050              $    5850.00 $ 128190.00
11/25/94          Buy    1     457.200
12/22/94          LExit  1     463.550              $    3100.00 $ 131290.00
01/11/96          Buy    1     586.400
01/25/96          LExit  1     599.750              $    6600.00 $ 137890.00
04/12/96          Buy    1     615.250
05/28/96          LExit  1     648.450              $   16525.00 $ 154415.00
07/09/96          Buy    1     628.000
08/05/96          LExit  1     630.550              $    1200.00 $ 155615.00
12/17/96          Buy    1     689.150
12/30/96          LExit  1     715.000              $   12850.00 $ 168465.00
```

Page 1

```
Type          System
Name          Chapter1      A/D Filter
Notes

Last Update   08/26/97 03:16pm
Printed on    08/26/97 03:18pm
Verified      YES



vars: adv(O), dec(O), quotient(0);

adv=average(close,10) of data2;
dec=average(close,10)of data3;
quotient=adv/dec;

if quotient>.75 then conditionl=true;
if quotient<.50 then conditionl=false;

if conditionl=true and rsi(close,8) crosses above 30 then buy on close;
if rsi(close,8) crosses below 65 then exitlong on close;

if conditionl=false then exitlong on close;
```

```
Chapter1 Wizard    CCSP99A-Daily    04/02/82 - 04/04/97
```

Performance Summary: All Trades

Total net profit	$ 200170.00	Open position P/L	$	0.00
Gross profit	$ 228025.00	Gross loss	$	-27855.00
Total # of trades	33	Percent profitable		82%
Number winning trades	27	Number losing trades		6
Largest winning trade	$ 20975.00	Largest losing trade	$	-7675.00
Average winning trade	$ 8445.37	Average losing trade	$	-4642.50
Ratio avg win/avg loss	1.82	Avg trade(win & loss)	$	6065.76
Max consec. winners	17	Max consec. losers		1
Avg # bars in winners	47	Avg # bars in losers		23
Max intraday drawdown	$ -12075.00			
Profit factor	8.19	Max # contracts held		1
Account size required	$ 12075.00	Return on account		1658%

Performance Summary: Long Trades

Total net profit	$ 200170.00	Open position P/L	$	0.00
Gross profit	$ 228025.00	Gross loss	$	-27855.00
Total # of trades	33	Percent profitable		82%
Number winning trades	27	Number losing trades		6
Largest winning trade	$ 20975.00	Largest losing trade	$	-7675.00
Average winning trade	$ 8445.37	Average losing trade	$	-4642.50
Ratio avg win/avg loss	1.82	Avg trade(win & loss)	$	6065.76
Max consec. winners	17	Max consec. losers		1
Avg # bars in winners	47	Avg # bars in losers		23
Max intraday drawdown	$ -12075.00			
Profit factor	8.19	Max # contracts held		1
Account size required	$ 12075.00	Return on account		1658%

Performance Summary: Short Trades

Total net profit	$	0.00	Open position P/L	$	0.00
Gross profit	$	0.00	Gross loss	$	0.00
Total # of trades		0	Percent profitable		0%
Number winning trades		0	Number losing trades		0
Largest winning trade	$	0.00	Largest losing trade	$	0.00
Average winning trade	$	0.00	Average losing trade	$	0.00
Ratio avg win/avg loss		100.00	Avg trade(win & loss)	$	0.00
Max consec. winners		0	Max consec. losers		0
Avg # bars in winners		0	Avg # bars in losers		0
Max intraday drawdown	$	0.00			
Profit factor		100.00	Max # contracts held		0
Account size required	$	0.00	Return on account		0%

```
Chapter1 Wizard   CCSP99A-Daily   04/02.82 - 04/04/97
Date      Time    Type  Cnts    Price  Signal Name    Entry P/L  Cumulative
```

Date	Type	Cnts	Price	Entry P/L	Cumulative
04/22/83	Buy	1	271.650		
04/25/83	LExit	1	270.000	$ -900.00	$ -900.00
05/23/83	Buy	1	275.800		
06/24/83	LExit	1	281.250	$ 2650.00	$ 1750.00
01/24/84	Buy	1	272.750		
03/23/84	LExit	1	260.660	$ -6120.00	$ -4370.00
09/10/84	Buy	1	263.590		
01/24/85	LExit	1	267.670	$ 1965.00	$ -2405.00
03/12/85	Buy	1	268.970		
05/14/85	LExit	1	268.850	$ -135.00	$ -2540.00
06/14/85	Buy	1	270.900		
07/18/85	LExit	1	279.460	$ 4205.00	$ 1665.00
07/25/85	Buy	1	275.410		
11/25/85	LExit	1	281.760	$ 3100.00	$ 4765.00
01/24/86	Buy	1	284.810		
02/19/86	LExit	1	298.910	$ 6975.00	$ 11740.00
04/08/86	Buy	1	309.750		
05/30/86	LExit	1	321.700	$ 5900.00	$ 17640.00
06/11/86	Buy	1	314.850		
08/19/86	LExit	1	321.150	$ 3075.00	$ 20715.00
09/22/86	Buy	1	310.060		
11/06/86	LExit	1	321.660	$ 5725.00	$ 26440.00
11/20/86	Buy	1	317.660		
01/23/87	LExit	1	345.740	$ 13965.00	$ 40405.00
04/06/88	Buy	1	330.140		
05/20/88	LExit	1	315.440	$ -7425.00	$ 32980.00
07/05/89	Buy	1	366.910		
08/01/89	LExit	1	387.010	$ 9975.00	$ 42955.00
09/18/89	Buy	1	388.660		
10/11/89	LExit	1	396.510	$ 3850.00	$ 46805.00
10/16/89	Buy	1	381.210		
01/04/90	LExit	1	394.490	$ 6565.00	$ 53370.00
10/30/90	Buy	1	328.840		
12/06/90	LExit	1	353.140	$ 12075.00	$ 65445.00
01/16/91	Buy	1	340.090		
02/01/91	LExit	1	365.340	$ 12550.00	$ 77995.00
05/01/91	Buy	1	402.900		
01/10/92	LExit	1	430.200	$ 13575.00	$ 91570.00
01/30/92	Buy	1	426.000		
08/04/92	LExit	1	435.950	$ 4900.00	$ 96470.00
08/27/92	Buy	1	426.150		
12/02/92	LExit	1	441.900	$ 7800.00	$ 104270.00
01/06/93	Buy	1	446.800		
02/08/93	LExit	1	460.000	$ 6525.00	$ 110795.00
02/22/93	Buy	1	448.050		
08/23/93	LExit	1	465.700	$ 8750.00	$ 119545.00
09/22/93	Buy	1	466.950		
10/18/93	LExit	1	478.800	$ 5850.00	$ 125395.00
11/23/93	Buy	1	471.050		
01/11/94	LExit	1	483.000	$ 5900.00	$ 131295.00
03/08/95	Buy	1	483.750		
03/31/95	LExit	1	500.700	$ 8400.00	$ 139695.00
05/19/95	Buy	1	516.650		
06/21/95	LExit	1	540.650	$ 11925.00	$ 151620.00
08/14/95	Buy	1	553.400		
09/21/95	LExit	1	573.600	$ 10025.00	$ 161645.00
10/11/95	Buy	1	570.300		
11/30/95	LExit	1	594.200	$ 11875.00	$ 173520.00
12/19/95	Buy	1	598.600		
02/14/96	LExit	1	636.650	$ 18950.00	$ 192470.00
03/01/96	Buy	1	628.000		
03/08/96	LExit	1	612.800	$ -7675.00	$ 184795.00
12/18/96	Buy	1	694.050		
01/23/97	LExit	1	736.150	$ 20975.00	$ 205770.00

```
Chapterl Wizard   CCSP99A-Daily   04/02/82 - 04/04/97
Date       Time      Type  Cnts    Price  Signal Name     Entry P/L  Cumulative
03/03/97             Buy    1     751.150
03/21/97             LExit  1     740.100               $  -5600.00 $ 200170.00
```

```
Type        System
Name        Chapter1 Wizard
Notes

Last Update  08/26/97 03:39pm
Printed on   08/26/97 03:47pm
Verified     YES
```

```
if close of data2>average(close,40) of data2 and close of data3>average(close,40) of data3
and rsi(close,8) crosses above 40 then buy on close;

if rsi(close,8) crosses below 75 then exitlong on close;

if close of data2<average(close,40) of data2 and close of data3<average(close,40) of data3
then exitlong on close;
```

Chapter 2

The VIX Index Timing Model

Volatility represents one of the key elements in the pricing of stock index options. Implied volatility represents the options market's consensus opinion of future annualized change in an underlying vehicle. The VIX index, tracked by the CBOE, measures the implied volatility of a series of "at the money" OEX index options. Typically the VIX will range between 10% and *20%.* The higher the VIX index, the more expensive option prices are due to volatility.

In developing your OEX trading strategies, you should take into account the level of implied volatility as measured by the VIX. Ideally, you should be selling options when implied volatility is high and about to fall. By the same token, you should attempt to buy options when implied volatility is low and about to rise.

The VIX model that I am about to share with you is designed to give you a small advantage in figuring out the direction of implied volatility. The model has excelled at catching 2-3 point moves in the VIX on the long and the short side. In fact, the model has had a perfect track record using only very simple rules.

You cannot go and trade the VIX index since no vehicle exists that isolates option implied volatility. In fact, I tried to price custom derivative options on the VIX with five major Wall Street equity derivatives departments and each refused to be my counterparty

on the trades. Therefore, rather than trade the VIX, you should incorporate the VIX model into your option strategies as noted.

Track records referred to in this chapter can be found on pages 29-32.

Rules of the VIX model: (Test period 5/93-8/97)

1) Sell VIX index at the close if it rises 2 points (i.e. from 15 to 17) above its 40 day moving average.

2) Exit short VIX index on close if the index falls more than 2 points below your short entry level and the VIX is less than 2 points above its 40 day moving average.

3) Buy VIX index at the close if it falls 2 points (i.e. from 11 to 9) below its 40 day moving average.

4) Exit long VIX index on close if it rises more than 2 points above your long entry level and the VIX is greater than its 40 day moving average minus 2 points.

Results and discussion:

The VIX model gave 37 signals. Every signal but one, eventually showed a gain. The average trade resulted in a pickup of 2.93 points on the VIX. Of course, the model does not capture the exact turning point in implied volatility. At times, markets have moved against positions for a number of sessions.

Wall Street has hired a bevy of scientists to predict implied volatility. However, by simply recognizing that the VIX index has a distinct tendency to revert to mean values, we should be able to make our options trading more efficient. Also note that short positions initiated by the model on the VIX last fewer days than longs. This may be due to a tendency for market volatility to rise less rapidly than it falls. The shorts have generated more rapid exits.

```
Vix System  VIX.X-Daily   05/24/93 - 08/25/97

                    Performance Summary:  All Trades

Total net profit         $     108.47   Open position P/L      $     0.43
Gross profit             $     108.53   Gross loss             $    -0.06

Total # of trades               37      Percent profitable            97%
Number winning trades           36      Number losing trades           1

Largest winning trade    $      7.45    Largest losing trade   $    -0.06
Average winning trade    $      3.01    Average losing trade   $    -0.06
Ratio avg win/avg loss         50.25    Avg trade(win & loss)  $     2.93

Max consec. winners             30      Max consec. losers             1
Avg # bars in winners           18      Avg # bars in losers          85

Max intraday drawdown    $    -10.26
Profit factor                1808.83    Max # contracts held           1
Account size required    $     10.26    Return on account          1057%
```
─ ─
```
                    Performance Summary:  Long Trades

Total net profit         $      49.72   Open position P/L      $     0.00
Gross profit             $      49.72   Gross loss             $     0.00

Total # of trades               12      Percent profitable           100%
Number winning trades           12      Number losing trades           0

Largest winning trade    $      7.45    Largest losing trade   $     0.00
Average winning trade    $      4.14    Average losing trade   $     0.00
Ratio avg win/avg loss        100.00    Avg trade(win & loss)  $     4.14

Max consec. winners             12      Max consec. losers             0
Avg # bars in winners           32      Avg # bars in losers           0

Max intraday drawdown    $     -2.32
Profit factor                 100.00    Max # contracts held           1
Account size required    $      2.32    Return on account          2143%
```
─ ─
```
                    Performance Summary:  Short Trades

Total net profit         $      58.75   Open position P/L      $     0.43
Gross profit             $      58.81   Gross loss             $    -0.06

Total # of trades               25      Percent profitable            96%
Number winning trades           24      Number losing trades           1

Largest winning trade    $      4.32    Largest losing trade   $    -0.06
Average winning trade    $      2.45    Average losing trade   $    -0.06
Ratio avg win/avg loss         40.84    Avg trade(win & loss)  $     2.35

Max consec. winners             20      Max consec. losers             1
Avg # bars in winners           11      Avg # bars in losers          85

Max intraday drawdown    $    -10.26
Profit factor                 980.17    Max # contracts held           1
Account size required    $     10.26    Return on account           573%
```

```
Vix System  VIX.X-Daily   05/24/93 - 08/25/97
Date     Time    Type  Cnts    Price  Signal Name    Entry P/L  Cumulative
09/20/93         Sell  1      14.670
09/27/93         SExit 1      11.500                 $    3.17 $     3.17
11/04/93         Sell  1      14.900
11/12/93         SExit 1      12.800                 $    2.10 $     5.27
11/16/93         Sell  1      14.520
11/24/93         SExit 1      12.030                 $    2.49 $     7.76
12/16/93         Buy   1      10.430
02/04/94         LExit 1      14.510                 $    4.08 $    11.84
02/04/94         Sell  1      14.510
02/07/94         SExit 1      12.480                 $    2.03 $    13.87
02/10/94         Sell  1      14.320
03/17/94         SExit 1      12.090                 $    2.23 $    16.10
03/29/94         Sell  1      16.500
04/21/94         SExit 1      13.900                 $    2.60 $    18.70
04/26/94         Buy   1      12.680
06/24/94         LExit 1      17.180                 $    4.50 $    23.20
06/24/94         Sell  1      17.180
06/27/94         SExit 1      13.670                 $    3.51 $    26.71
06/30/94         Sell  1      15.820
07/07/94         SExit 1      13.790                 $    2.03 $    28.74
07/18/94         Buy   1      10.550
09/20/94         LExit 1      13.900                 $    3.35 $    32.09
09/20/94         Sell  1      13.900
12/14/94         SExit 1      12.500                 $    1.40 $    33.49
12/14/94         Buy   1      12.500
05/31/95         LExit 1      14.560                 $    2.06 $    35.55
05/31/95         Sell  1      14.560
06/13/95         SExit 1      12.210                 $    2.35 $    37.90
09/01/95         Buy   1      11.430
10/04/95         LExit 1      14.940                 $    3.51 $    41.41
10/04/95         Sell  1      14.940
11/03/95         SExit 1      12.680                 $    2.26 $    43.67
11/28/95         Buy   1      11.690
12/18/95         LExit 1      15.010                 $    3.32 $    46.99
12/18/95         Sell  1      15.010
12/19/95         SExit 1      12.520                 $    2.49 $    49.48
01/09/96         Sell  1      15.640
01/19/96         SExit 1      13.600                 $    2.04 $    51.52
02/08/96         Sell  1      16.170
04/19/96         SExit 1      15.950                 $    0.22 $    51.74
04/19/96         Buy   1      15.950
06/18/96         LExit 1      19.140                 $    3.19 $    54.93
06/18/96         Sell  1      19.140
06/25/96         SExit 1      16.830                 $    2.31 $    57.24
06/28/96         Buy   1      15.200
07/15/96         LExit 1      22.650                 $    7.45 $    64.69
07/15/96         Sell  1      22.650
07/18/96         SExit 1      18.330                 $    4.32 $    69.01
07/22/96         Sell  1      21.530
07/26/96         SExit 1      18.620                 $    2.91 $    71.92
07/29/96         Sell  1      20.800
08/02/96         SExit 1      17.090                 $    3.71 $    75.63
08/09/96         Buy   1      16.260
09/05/96         LExit 1      21.140                 $    4.88 $    80.51
09/05/96         Sell  1      21.140
09/06/96         SExit 1      17.930                 $    3.21 $    83.72
10/28/96         Sell  1      19.250
11/06/96         SExit 1      17.220                 $    2.03 $    85.75
11/14/96         Buy   1      15.160
12/03/96         LExit 1      19.770                 $    4.61 $    90.36
12/03/96         Sell  1      19.770
04/07/97         SExit 1      19.830                 $   -0.06 $    90.30
04/07/97         Buy   1      19.830
05/16/97         LExit 1      24.210                 $    4.38 $    94.68
```

```
Vix System  VIX.X-Daily   05/24/93 - 08/25/97
Date     Time    Type  Cnts    Price  Signal Name      Entry P/L  Cumulative
05/16/97         Sell  1      24.210
05/20/97         SExit 1      21.700                   $    2.51 $    97.19
06/25/97         Sell  1      24.250
07/02/97         SExit 1      21.520                   $    2.73 $    99.92
07/18/97         Sell  1      26.120
07/23/97         SExit 1      24.040                   $    2.08 $   102.00
08/07/97         Buy   1      20.910
08/12/97 .       LExit 1      25.300                   $    4.39 $   106.39
08/12/97         Sell  1      25.300
08/20/97         SExit 1      23.220                   $    2.08 $   108.47
08/21/97         Sell  1      26.820
```

```
Type          System
Name          Vix System
Notes

Last Update   08/26/97 04:12pm
Printed on    08/26/97 04:17pm
Verified      NO




if close>average(close, 40) +2.00 then sell on close;

if close<average (close, 40) +2.00 and close<entryprice -2.00
then exitshort on close;

if close<average(close, 40) -2.00 then buy on close;

if close>average(close,40) +2.00 and close>entryprice +2.00
then exitlong on close;
```

Chapter 3

Crash Filters For The Stock Market

This chapter will be short and sweet. Though the topic may seem a bit unusual, it may end up being the most important chapter in the book for many of you. The information contained is crucial. Indeed, recognizing the pattern I will show you may very well end up saving your career as a trader. It may also *make* your career as a trader if the pattern unfolds, and you take aggressive positions for a smash. In fact, in 1994, this model gave a signal that I relayed to my fund manager. He took immediate action in the OEX Put market and saved the fund millions of dollars over the next month. The subject of this report is panic liquidation of the stock market, when it has happened, how to predict it, and how to profit from it.

My crash filter pattern does not get tripped too often. Usually the market goes up. In fact, on only 235 days has the trade called for a short position in the market since 1986. Even when the pattern does occur, there have been times when no panic liquidation has taken place. Do not panic yourself when the pattern appears imminent. No market move can be called inevitable. However, taking protective measures with your money and making a speculation in put options seem warranted.

Many commentators have theorized that drops in the price of Treasury instruments such as bonds, notes or bills can be very negative for stocks. Similarly, other researchers have found a link between the U.S. dollar's price momentum and stock prices. A falling dollar

normally is negative for stocks while a rising dollar is positive.

What this report will show you is a completely mechanical method for gauging the weakness of Treasury notes and the trade-weighted U.S. dollar for use in S&P trading. My studies show conclusively that panic liquidation of stocks occurs most readily when a simultaneous deterioration of intermediate/long term government bonds and the trade-weighted dollar is taking place. Sometimes just one of these conditions can be met and stocks drop, but the combined meltdown has carried more dire consequences.

Requirements of the Crash Filter Model:

1) Maintain the weekly closing prices of the ten-year note future. Every Friday, write down the closing price of the ten-year note. If Friday is a holiday, record the close of the last day of the week in its place.

2) Maintain the weekly closing prices of the U.S. dollar index futures contract. Every Friday write down the closing price of the trade-weighted dollar futures. (Symbol DX) If Friday is a holiday, record the close of the last day of the week in its place.

Rules of the crash Filter Model:

1) If the weekly close of the ten-year note is lower than the lowest weekly closing price of the ten prior weeks, then the interest rate filter is bearish.

2) If the weekly close of the U.S. dollar index future is lower than the lowest weekly closing price of the eight prior weeks, then the currency filter is bearish.

3) If both the interest rate filter and the currency are bearish on the same date, then our crash model goes into effect. The crash filter remains in effect for 20 days following the signal. Long positions at this time carry maximal risk while shorts carry maximal reward potential.

4) At the end of 40 days, exit shorts and reset the model. If the interest rate and cur-

rency filter are both bearish at the next weekly close, then the signal goes into effect for 40 days starting at that repeat signal date instead of the previous signal date.

Track record and discussion:

(Includes $75 commission and slippage costs)

Track records referred to in this chapter can be found on pages 36-38.

As you can see, this model went into action during all the bear market years since the study period began in 1986. The model handily caught the collapses in early and late 1987. It caught the landslides of early and late 1990. Finally, the model caught the last bear year, which as of the date of this writing, was 1994. The model signaled two false trades in 1988. As you can see, not even the simultaneous declines of the Treasury and U.S. dollar markets can guarantee a stock market decline.

However, the model made 9.10 dollars for every dollar that it lost. It isolated the three major bear phases of the past 10 years and made $101,295 on a single contract in less than 250 days of activity. I pay very close attention to this model and encourage you to do the same.

```
chapt3 crash  CCSP99A-Daily   04/21/82 - 04/04/97

                       Performance Summary:  All Trades

Total net profit       $ 101295.00   Open position P/L     $       0.00
Gross profit           $ 113800.00   Gross loss            $  -12505.00

Total # of trades             11     Percent profitable            82%
Number winning trades          9     Number losing trades           2

Largest winning trade  $  68700.00   Largest losing trade  $   -9505.00
Average winning trade  $  12644.44   Average losing trade  $   -6252.50
Ratio avg win/avg loss        2.02   Avg trade(win & loss) $    9208.64

Max consec. winners            5     Max consec. losers             2
Avg # bars in winners         31     Avg # bars in losers          40

Max intraday drawdown  $ -18455.00
Profit factor                 9.10   Max # contracts held           1
Account size required  $  18455.00   Return on account           549%
```

```
                       Performance Summary:  Long Trades

Total net profit       $       0.00   Open position P/L     $       0.00
Gross profit           $       0.00   Gross loss            $       0.00

Total # of trades              0     Percent profitable             0%
Number winning trades          0     Number losing trades           0

Largest winning trade  $       0.00   Largest losing trade  $       0.00
Average winning trade  $       0.00   Average losing trade  $       0.00
Ratio avg win/avg loss      100.00   Avg trade(win & loss) $       0.00

Max consec. winners            0     Max consec. losers             0
Avg # bars in winners          0     Avg # bars in losers           0

Max intraday drawdown  $       0.00
Profit factor               100.00   Max # contracts held           0
Account size required  $       0.00   Return on account            0%
```

```
chapt3 crash  CCSP99A-Daily    04/21/82 - 04/04/97
Date      Time     Type  Cnts    Price  Signal Name     Entry P/L  Cumulative
02/13/87           Sell  1     358.490
04/13/87           SExit 1     355.390                 $   1550.00 $   1550.00
04/13/87           Sell  1     355.390             -
04/13/87           SExit 1     355.390                 $      0.00 $   1550.00
08/21/87           Sell  1     404.440
10/19/87           SExit 1     267.040                 $  68700.00 $  70250.00
10/19/87           Sell  1     267.040
10/19/87           SExit 1     267.040                 $      0.00 $  70250.00
04/04/88           Sell  1     319.690
05/31/88           SExit 1     325.690                 $  -3000.00 $  67250.00
11/25/88           Sell  1     325.840
01/24/89           SExit 1     344.850                 $  -9505.00 $  57745.00
09/29/89           Sell  1     389.310
11/27/89           SExit 1     383.410                 $   2950.00 $  60695.00
12/29/89           Sell  1     390.990
02/27/90           SExit 1     365.990                 $  12500.00 $  73195.00
08/10/90           Sell  1     362.840
10/08/90           SExit 1     340.040                 $  11400.00 $  84595.00
02/18/94           Sell  1     475.800
04/19/94           SExit 1     449.850                 $  12975.00 $  97570.00
09/09/94           Sell  1     473.400
11/04/94           SExit 1     465.950                 $   3725.00 $ 101295.00
```

```
Type        : System
Name        : chapt3 crash
Notes       :

Last Update : 08/26/97 10:33pm
Printed on  : 08/28/97 09:33pm
Verified    : NO
```

```
{Crash Filter Pattern}

if value1=0 then begin
if close of data2<lowest(close,8)[1] of data2 and
  close of data3<lowest(close,8)[1] of data3
then sell on close;
end;

if barssinceexit(1)>1 then begin
if close of data2<lowest(close,8)[1] of data2 and
  close of data3<lowest(close,8)[1] of data3
then sell on close;
end;


if barssinceentry=20 then exitshort on close;
if barssinceentry=20 then value1=value1+1;

(You can test by opening a print window and using
the following section.  Check very bottom of print window
by scrolling down to the end of it}

if date>880513 and date <880531 then print
(date,"     "," BSEntry ",barssinceentry, "  bsexit  ", barssinceexit(1));
```

Chapter 4

Trading the Options Expiration Method

As you may know, on option expiration day each month in the stock market, volume and volatility have a tendency to swell. Very small moves in the stock indices may determine whether or not vast sums are won or lost in the options markets. Indeed, there is an overwhelmingly powerful motive for large traders to act to make their positions profitable at expiration. In this chapter, you will learn how market makers and large traders act in ways that create profit opportunity for savvy professionals.

Specifically, I will teach you how and when professionals have been taking positions to profit from the expiration shenanigans. The mechanical entry into the S&P 500 futures contract provided has made approximately $115,000 with 76% accuracy trading a single contract. I encourage you not to fear to trade the expirations, but to study them instead. Track records referred to in this chapter can be found on pages 42-51.

Predatory trading tactics at expiration

One tactic that can sometimes be seen on expiration day in stock indices is nicknamed the "Paris March" by top hedge fund traders. The nickname comes from the famous pictures of the Nazis marching by the *Arc de Triomphe* in Paris during WWII. In the photo, heavily armed bullies storm the city while the residents stand by defenselessly.

Similarly, in the stock market, major players will buy large positions in individual stock call options before expiration day. Traders are happy to sell these short-term options to the big players because the time decay is so extensively close to expiration that the sale looks like a good bet. However, the trick that follows can end up putting the seller out of business.

To carry out the Paris March, the large house that bought the calls buys the underlying stock(s) just an hour or so before expiration to force the calls into the money. Call options that were slightly out of the money suddenly go into the money and force the brokerage houses to scramble to buy stock to meet the exercises. This strategy creates a short-term buying surge and the buying looks to be coming from many sources—a powerful psychological driver in the market. The trading house profits on its long cash position and its calls or short puts at expiration. Naturally, the market has a tendency to go down the morning following expiration as the artificial demand for stocks disappears.

I have created a historical calendar for you of options expirations from 1981-1997 so that you may conduct your own research into expiration phenomena. But now, I will give you my best trading strategy for exploiting the upward bias of many pre-expiration periods.

Our Winning Expiration Trading Method

I look for an unusual disturbance in volatility patterns 4-5 days prior to options expiration to tip me off that a tradable expiration move is on the way. This system takes positions at the close of the "tip-off day and holds until the close of the expiration day.

Rules:

1) If the range of the day five trading days before expiration day is less than 70% of the average range of the previous three days or is greater than 140% of the average range of the previous three days then an unusual volatility disturbance has taken place.

2) Given an unusual volatility disturbance five days before expiration, buy the S&P 500 futures on the close of the unusual disturbance day.

3) Hold the long futures position until the close of options expiration day.

Discussions and Results

(Using Prophet Information Services continuous, adjusted futures S&P 500 data from 4/82-4/97. ($75 deducted for costs.)

We have tested results of trading on a volatility disturbance four days before expiration with very similar results. However, for the record, we will use five days as our model pattern. The expiration system has traded 66 times since 1982. Total net profit of $122,530 has been achieved trading only one lot. Profitability for this model has increased sharply in recent years as the phenomenon has become more pronounced.

The system has also tallied up an extraordinary win/loss ratio of 2.43 and an impressive profit factor of 7.30.

You would have been in the market for only 340 days using this model. Therefore, being long less than 10% of the time since the inception of the S&P contract, this model has captured approximately 51 % of the total index points of buy and hold. This statistical phenomenon is very powerful. If you think likewise, maybe you will conduct your own research into this type of trading.

For users of Tradestation, the code and calendar for the expiration system are included on the following page:

OPTIONS EXPIRATION CALENDAR
1981 - 1997

year	jan	feb	mar	apr	may	jun	jul	aug	sept	oct	nov	dec
1981	16	20	20	16	15	19	17	21	18	16	20	18
1982	15	19	19	16	21	18	16	20	17	15	19	17
1983	21	18	18	15	20	17	15	19	16	21	18	16
1984	20	17	16	19	18	15	20	17	21	19	16	21
1985	18	15	15	19	17	21	19	16	20	18	15	20
1986	17	21	21	18	16	20	18	15	19	17	21	19
1987	16	20	20	16	15	19	17	21	18	16	20	18
1988	15	19	18	15	20	17	15	19	16	21	18	16
1989	20	17	17	21	19	16	21	18	15	20	17	15
1990	19	16	16	20	18	15	20	17	21	19	16	21
1991	18	15	15	19	17	21	19	16	20	18	15	20
1992	17	21	20	16	15	19	17	21	18	16	20	18
1993	15	19	19	16	21	18	16	20	17	15	19	17
1994	21	18	18	15	20	17	15	19	16	21	18	16
1995	20	17	17	21	19	16	21	18	15	20	17	15
1996	19	16	15	19	17	21	19	16	20	18	15	20
1997	17	21	21	18	16	20	18	15	19	17	21	19

```
GTC-Expiration  CCSP99A-Daily   04/01/82 - 03/31/97
```

Performance Summary: All Trades

Total net profit	$ 122530.00	Open position P/L	$ 0.00
Gross profit	$ 141980.00	Gross loss	$ -19450.00
Total # of trades	68	Percent profitable	75%
Number winning trades	51	Number losing trades	17
Largest winning trade	$ 10800.00	Largest losing trade	$ -4850.00
Average winning trade	$ 2783.92	Average losing trade	$ -1144.12
Ratio avg win/avg loss	2.43	Avg trade(win & loss)	$ 1801.91
Max consec. winners	16	Max consec. losers	3
Avg # bars in winners	5	Avg # bars in losers	5
Max intraday drawdown	$ -6175.00		
Profit factor	7.30	Max # contracts held	1
Account size required	$ 6175.00	Return on account	1984%

Performance Summary: Long Trades

Total net profit	$ 122530.00	Open position P/L	$ 0.00
Gross profit	$ 141980.00	Gross loss	$ -19450.00
Total # of trades	68	Percent profitable	75%
Number winning trades	51	Number losing trades	17
Largest winning trade	$ 10800.00	Largest losing trade	$ -4850.00
Average winning trade	$ 2783.92	Average losing trade	$ -1144.12
Ratio avg win/avg loss	2.43	Avg trade(win & loss)	$ 1801.91
Max consec. winners	16	Max consec. losers	3
Avg # bars in winners	5	Avg # bars in losers	5
Max intraday drawdown	$ -6175.00		
Profit factor	7.30	Max # contracts held	1
Account.size required	$ 6175.00	Return on account	1984%

Performance Summary: Short Trades

Total net profit	$ 0.00	Open position P/L	$ 0.00
Gross profit	$ 0.00	Gross loss	$ 0.00
Total # of trades	0	Percent profitable	0%
Number winning trades	0	Number losing trades	0
Largest winning trade	$ 0.00	Largest losing trade	$ 0.00
Average winning trade	$ 0.00	Average losing trade	$ 0.00
Ratio avg win/avg loss	100.00	Avg trade(win & loss)	$ 0.00
Max consec. winners	0	Max consec. losers	0
Avg # bars in winners	0	Avg # bars in losers	0
Max intraday drawdown	$ 0.00		
Profit factor	100.00	Max # contracts held	0
Account size required	$ 0.00	Return on account	0%

GTC-Expiration	CCSP99A-Daily		04/01/82 - 03/31/97			
Date Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
12/10/82	Buy	1	251.520			
12/17/82	LExit	1	250.160		$ -680.00	$ -680.00
06/10/83	Buy	1	274.350			
06/17/83	LExit	1	281.500		$ 3575.00	$ 2895.00
07/08/83	Buy	1	278.350			
07/15/83	LExit	1	275.200		$ -1575.00	$ 1320.00
08/12/83	Buy	1	273.450			
08/19/83	LExit	1	274.900		$ 725.00	$ 2045.00
11/11/83	Buy	1	275.730			
11/18/83	LExit	1	274.580		$ -575.00	$ 1470.00
01/13/84	Buy	1	274.150			
01/20/84	LExit	1	273.050		$ -550.00	$ 920.00
03/09/84	Buy	1	259.800			
03/16/84	LExit	1	263.010		$ 1605.00	$ 2525.00
04/12/84	Buy	1	261.410			
04/19/84	LExit	1	260.910		$ -250.00	$ 2275.00
07/13/84	Buy	1	250.790			
07/20/84	LExit	1	248.940		$ -925.00	$ 1350.00
10/12/84	Buy	1	261.460			
10/19/84	LExit	1	265.960		$ 2250.00	$ 3600.00
12/14/84	Buy	1	257.260			
12/21/84	LExit	1	259.720		$ 1230.00	$ 4830.00
04/12/85	Buy	1	266.600			
04/19/85	LExit	1	265.900		$ -350.00	$ 4480.00
05/10/85	Buy	1	269.850			
05/17/85	LExit	1	271.850		$ 1000.00	$ 5480.00
08/09/85	Buy	1	271.310			
08/16/85	LExit	1	269.360		$ -975.00	$ 4505.00
10/11/85	Buy	1	266.510			
10/18/85	LExit	1	267.660		$ 575.00	$ 5080.00
11/08/85	Buy	1	274.660			
11/15/85	LExit	1	279.510		$ 2425.00	$ 7505.00
12/13/85	Buy	1	291.460			
12/20/85	LExit	1	291.710		$ 125.00	$ 7630.00
01/10/86	Buy	1	284.360			
01/17/86	LExit	1	286.110		$ 875.00	$ 8505.00
02/13/86	Buy	1	296.460			
02/21/86	LExit	1	302.960		$ 3250.00	$ 11755.00
06/13/86	Buy	1	320.400			
06/20/86	LExit	1	321.650		$ 625.00	$ 12380.00
09/12/86	Buy	1	302.800			
09/19/86	LExit	1	305.960		$ 1580.00	$ 13960.00
10/10/86	Buy	1	310.560			
10/17/86	LExit	1	313.410		$ 1425.00	$ 15385.00
12/12/86	Buy	1	322.510			
12/19/86	LExit	1	325.190		$ 1340.00	$ 16725.00
01/09/87	Buy	1	335.940			
01/16/87	LExit	1	343.140		$ 3600.00	$ 20325.00
03/13/87	Buy	1	365.890			
03/20/87	LExit	1	370.640		$ 2375.00	$ 22700.00
06/12/87	Buy	1	372.840			
06/19/87	LExit	1	377.340		$ 2250.00	$ 24950.00
07/10/87	Buy	1	377.890			
07/17/87	LExit	1	383.340		$ 2725.00	$ 27675.00
12/11/87	Buy	1	300.990			
12/18/87	LExit	1	312.840		$ 5925.00	$ 33600.00
01/08/88	Buy	1	305.140			
01/15/88	LExit	1	315.890		$ 5375.00	$ 38975.00
07/08/88	Buy	1	332.390			
07/15/88	LExit	1	333.640		$ 625.00	$ 39600.00
08/12/88	Buy	1	323.390			
08/19/88	LExit	1	322.790		$ -300.00	$ 39300.00
09/09/88	Buy	1	327.590			
09/16/88	LExit	1	330.140		$ 1275.00	$ 40575.00

GTC-Expiration   CCSP99A-Daily   04/01/82 - 03/31/97

Date	Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
11/11/88		Buy	1	327.090			
11/18/88		LExit	1	324.290		$ -1400.00	$ 39175.00
12/09/88		Buy	1	335.790			
12/16/88		LExit	1	333.400		$ -1195.00	$ 37980.00
01/13/89		Buy	1	340.850			
01/20/89		LExit	1	343.300		$ 1225.00	$ 39205.00
07/14/89		Buy	1	378.010			
07/21/89		LExit	1	380.510		$ 1250.00	$ 40455.00
08/11/89		Buy	1	388.760			
08/18/89		LExit	1	390.260		$ 750.00	$ 41205.00
10/13/89		Buy	1	365.560			
10/20/89		LExit	1	387.160		$ 10800.00	$ 52005.00
11/10/89		Buy	1	378.360			
11/17/89		LExit	1	379.560		$ 600.00	$ 52605.00
01/12/90		Buy	1	375.590			
01/19/90		LExit	1	376.840		$ 625.00	$ 53230.00
05/11/90		Buy	1	384.990			
05/18/90		LExit	1	386.340		$ 675.00	$ 53905.00
06/08/90		Buy	1	390.140			
06/15/90		LExit	1	393.490		$ 1675.00	$ 55580.00
01/11/91		Buy	1	338.140			
01/18/91		LExit	1	355.840		$ 8850.00	$ 64430.00
05/10/91		Buy	1	397.300			
05/17/91		LExit	1	395.600		$ -850.00	$ 63580.00
07/12/91		Buy	1	401.050			
07/19/91		LExit	1	405.050		$ 2000.00	$ 65580.00
09/13/91		Buy	1	401.950			
09/20/91		LExit	1	405.950		$ 2000.00	$ 67580.00
10/11/91		Buy	1	398.450			
10/18/91		LExit	1	410.200		$ 5875.00	$ 73455.00
12/13/91		Buy	1	400.450			
12/20/91		LExit	1	402.300		$ 925.00	$ 74380.00
02/13/92		Buy	1	428.250			
02/21/92		LExit	1	426.100		$ -1075.00	$ 73305.00
05/08/92		Buy	1	429.450			
05/15/92		LExit	1	423.950		$ -2750.00	$ 70555.00
07/10/92		Buy	1	427.200			
07/17/92		LExit	1	427.150		$ -25.00	$ 70530.00
09/11/92		Buy	1	431.450			
09/18/92		LExit	1	435.700		$ 2125.00	$ 72655.00
12/11/92		Buy	1	445.850			
12/18/92		LExit	1	452.900		$ 3525.00	$ 76180.00
03/12/93		Buy	1	460.800			
03/19/93		LExit	1	461.500		$ 350.00	$ 76530.00
04/08/93		Buy	1	453.600			
04/16/93		LExit	1	460.550		$ 3475.00	$ 80005.00
07/09/93		Buy	1	459.450			
07/16/93		LExit	1	457.200		$ -1125.00	$ 78880.00
08/13/93		Buy	1	460.350			
08/20/93		LExit	1	466.600		$ 3125.00	$ 82005.00
10/08/93		Buy	1	470.650			
10/15/93		LExit	1	479.650		$ 4500.00	$ 86505.00
11/11/94		Buy	1	466.350			
11/18/94		LExit	1	466.750		$ 200.00	$ 86705.00
03/10/95		Buy	1	491.500			
03/17/95		LExit	1	496.050		$ 2275.00	$ 88980.00
06/09/95		Buy	1	525.000			
06/16/95		LExit	1	535.600		$ 5300.00	$ 94280.00
09/08/95		Buy	1	565.100			
09/15/95		LExit	1	576.050		$ 5475.00	$ 99755.00
01/12/96		Buy	1	585.700			
01/19/96		LExit	1	594.900		$ 4600.00	$ 104355.00
03/08/96		Buy	1	612.800			
03/15/96		LExit	1	621.650		$ 4425.00	$ 108780.00

GTC-Expiration	CCSP99A-Daily		04/01/82 - 03/31/97				
Date	Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
04/12/96		Buy	1	615.250			
04/19/96		LExit	1	621.700		$ 3225.00	$ 112005.00
05/10/96		Buy	1	629.550			
05/17/96		LExit	1	646.150		$ 8300.00	$ 120305.00
01/10/97		Buy	1	722.500			
01/17/97		LExit	1	736.650		$ 7075.00	$ 127380.00
02/13/97		Buy	1	770.050			
02/21/97		LExit	1	760.350		$ -4850.00	$ 122530.00

```
Page  1_____
```

```
Type     :     System
Name          : GTC-Expiration
Notes         :

Last Update : 08/28/97 11:34pm
Printed on  : 08/28/97 11:35pm
Verified    : YES




 (960524 5B4 opt
If Options exp is
thurs because of holiday - 5 days B4 is previous Thurs.

Datal is market being tested daily data

User functions WkB4optl is used because of memory
limitations apparently resulting from size of the calendar    ,

Variables: B4Count(5), daysleft(O) ,

{User Function WkB4optl for 5th trading day B4 expiration
     1/82-12/96  Expiration day trading day  = 0}


if (range>average(range,3)[1]*1.4) or range<average (range,3)[1]*•V


 then begin

daysleft=WkB4optl; {user function for all months 5 days B4 expiration)
If daysleft=5 then Conditionl=true;

If Conditionl=true then begin
If B4Count=5 then buy on close;
B4Count=B4Count-l;
end;
end;

If barssinceentry=5 then begin
exitlong on close;
conditionl=false;
B4Count=5;
end;
```

```
Page 1
_____

Type        : Function
Name        : WkB4Opt1
Notes       :

Last Update : 08/26/97  11:02pm
Printed on  : 08/28/97  11:37pm
Verified    : YES

_____


{WkB4Opt1 5/24/96
USER FUNCTION
gives the date for which there are
5 trading days left B4 options expiratin
adjusted for holidays as necessary
 }

var: daysleft(0);

Daysleft=99;


If date= 820108 Then daysleft= 5;
If date= 830114 Then daysleft= 5;
If date= 840113 Then daysleft= 5;
If date= 850111 Then daysleft= 5;
If date= 860110 Then daysleft= 5;
If date= 870109 Then daysleft= 5;
If date= 880108 Then daysleft= 5;
If date= 890113 Then daysleft= 5;
If date= 900112 Then daysleft= 5;
If date= 910111 Then daysleft= 5;
If date= 920110 Then daysleft= 5;
If date= 930108 Then daysleft= 5;
If date= 940114 Then daysleft= 5;
If date= 950113 Then daysleft= 5;
If date= 960112 Then daysleft= 5;
If date= 970110 Then daysleft= 5;

(for Feb following Mon B4 Exp is holiday
Start Thurs and use 15 days for all years)
If date= 820211 Then daysleft= 5;
If date= 830210 Then daysleft= 5;
If date= 840209 Then daysleft= 5;
If date= 850207 Then daysleft= 5;
If date= 860213 Then daysleft= 5;
If date= 870212 Then daysleft= 5;
If date= 880211 Then daysleft= 5;
If date= 890209 Then daysleft= 5;
If date= 900208 Then daysleft= 5;
If date= 910209 Then daysleft= 5;
If date= 920213 Then daysleft= 5;
If date= 930211 Then daysleft= 5;
If date= 940210 Then daysleft= 5;
If date= 950209 Then daysleft= 5;
If date= 960208 Then daysleft= 5;
If date= 970213 Then daysleft= 5;

(holidays 3/28/86, 3/24/89
No action required }
If date= 820312 Then daysleft= 5;
If date= 830311 Then daysleft= 5;
If date= 840309 Then daysleft= 5;
If date= 850308 Then daysleft= 5;
If date= 860314 Then daysleft= 5;
If date= 870313 Then daysleft= 5;
If date= 880311 Then daysleft= 5;
If date= 890310 Then daysleft= 5;
```

```
Page 2
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If date= 900309 Then daysleft= 5;
If date= 910308 Then daysleft= 5;
If date= 920313 Then daysleft= 5;
If date= 930312 Then daysleft= 5;
If date= 940311 Then daysleft= 5;
If date= 950310 Then daysleft= 5;
If date= 960308 Then daysleft= 5;
If date= 970314 Then daysleft= 5;

{holidays  4/20/84, 4/17/87,4/17/92.
Subt 1 each year. Will be Thurs opt exp
15 day period}
If date= 820409 Then daysleft= 5;
If date= 830408 Then daysleft= 5;
If date= 840412 Then daysleft= 5;
If date= 850412 Then daysleft= 5;
If date= 860411 Then daysleft= 5;
If date= 870409 Then daysleft= 5;
If date= 880408 Then daysleft= 5;
If date= 890414 Then daysleft= 5;
If date= 900412 Then daysleft= 5;
If date= 910412 Then daysleft= 5;
If date= 920409 Then daysleft= 5;
If date= 930408 Then daysleft= 5;
If date= 940408 Then daysleft= 5;
If date= 950413 Then daysleft= 5;
If date= 960412 Then daysleft= 5;
If date= 970411 Then daysleft= 5;

If date= 820514 Then daysleft= 5;
If date= 830513 Then daysleft= 5;
If date= 840511 Then daysleft= 5;
If date= 850510 Then daysleft= 5;
If date= 860509 Then daysleft= 5;
If date= 870508 Then daysleft= 5;
If date= 880513 Then daysleft= 5;
If date= 890512 Then daysleft= 5;
If date= 900511 Then daysleft= 5;
If date= 910510 Then daysleft= 5;
If date= 920508 Then daysleft= 5;
If date= 930514 Then daysleft= 5;
If date= 940513 Then daysleft= 5;
If date= 950512 Then daysleft= 5;
If date= 960510 Then daysleft= 5;
If date= 970509 Then daysleft= 5;

If date= 820611 Then daysleft= 5;
If date= 830610 Then daysleft= 5;
If date= 840608 Then daysleft= 5;
If date= 850614 Then daysleft= 5;
If date= 860613 Then daysleft= 5;
If date= 870612 Then daysleft= 5;
If date= 880610 Then daysleft= 5;
If date= 890609 Then daysleft= 5;
If date= 900608 Then daysleft= 5;
If date= 910614 Then daysleft= 5;
If date= 920612 Then daysleft= 5;
If date= 930611 Then daysleft= 5;
If date= 940610 Then daysleft= 5;
If date= 950609 Then daysleft= 5;
If date= 960614 Then daysleft= 5;
If date= 970613 Then daysleft= 5;

If date= 820709 Then daysleft= 5;
If date= 830708 Then daysleft= 5;
If date= 840713 Then daysleft= 5;
If date= 850712 Then daysleft= 5;
If date= 860711 Then daysleft= 5;
If date= 870710 Then daysleft= 5;
```

```
If date= 880708 Then daysleft= 5;
If date= 890714 Then daysleft= 5;
If date= 900713 Then daysleft= 5;
If date= 910712 Then daysleft= 5;
If date= 920710 Then daysleft= 5;
If date= 930709 Then daysleft= 5;
If date= 940708 Then daysleft= 5;
If date= 950714 Then daysleft= 5;
If date= 960712 Then daysleft= 5;
If date= 970711 Then daysleft= 5;

If date= 820813 Then daysleft= 5;
If date= 830812 Then daysleft= 5;
If date= 840810 Then daysleft= 5;
If date= 850809 Then daysleft= 5;
If date= 860808 Then daysleft= 5;
If date= 870814 Then daysleft= 5;
If date= 880812 Then daysleft= 5;
If date= 890811 Then daysleft= 5;
If date= 900810 Then daysleft= 5;
If date= 910809 Then daysleft= 5;
If date= 920814 Then daysleft= 5;
If date= 930813 Then daysleft= 5;
If date= 940812 Then daysleft= 5;
If date= 950811 Then daysleft= 5;
If date= 960809 Then daysleft= 5;
If date= 970808 Then daysleft= 5;
If date= 820910 Then daysleft= 5;
If date= 830909 Then daysleft= 5;
If date= 840914 Then daysleft= 5;
If date= 850913 Then daysleft= 5;
If date= 860912 Then daysleft= 5;
If date= 870911 Then daysleft= 5;
If date= 880909 Then daysleft= 5;
If date= 890908 Then daysleft= 5;
If date= 900914 Then daysleft= 5;
If date= 910913 Then daysleft= 5;
If date= 920911 Then daysleft= 5;
If date= 930910 Then daysleft= 5;
If date= 940909 Then daysleft= 5;
If date= 950908 Then daysleft= 5;
If date= 960913 Then daysleft= 5;

If date= 821008 Then daysleft= 5;
If date= 831014 Then daysleft= 5;
If date= 841012 Then daysleft= 5;
If date= 851011 Then daysleft= 5;
If date= 861010 Then daysleft= 5;
If date= 871009 Then daysleft= 5;
If date= 881014 Then daysleft= 5;
If date= 891013 Then daysleft= 5;
If date= 901012 Then daysleft= 5;
If date= 911011 Then daysleft= 5;
If date= 921009 Then daysleft= 5;
If date= 931008 Then daysleft= 5;
If date= 941014 Then daysleft= 5;
If date= 951013 Then daysleft= 5;
If date= 961011 Then daysleft= 5;

{Thanksgiving==4th Thurs - no action req}
If date= 821112 Then daysleft= 5;
If date= 831111 Then daysleft= 5;
If date= 841109 Then daysleft= 5;
If date= 851108 Then daysleft= 5;
If date= 861114 Then daysleft= 5;
If date= 871113 Then daysleft= 5;
If date= 881111 Then daysleft= 5;
If date= 891110 Then daysleft= 5;
If date= 901109 Then daysleft= 5;
```

Page 4

```
If date= 911108 Then daysleft= 5;
If date= 921113 Then daysleft= 5;
If date= 931112 Then daysleft= 5;
If date= 941111 Then daysleft= 5;
If date= 951110 Then daysleft= 5;
If date= 961108 Then daysleft= 5;

If date= 821210 Then daysleft= 5;
If date= 831209 Then daysleft= 5;
If date= 841214 Then daysleft= 5;
If date= 851213 Then daysleft= 5;
If date= 861212 Then daysleft= 5;
If date= 871211 Then daysleft= 5;
If date= 881209 Then daysleft= 5;
If date= 891208 Then daysleft= 5;
If date= 901214 Then daysleft= 5;
If date= 911213 Then daysleft= 5;
If date= 921211 Then daysleft= 5;
If date= 931210 Then daysleft= 5;
If date= 941209 Then daysleft= 5;
If date= 951208 Then daysleft= 5;
If date= 961213 Then daysleft= 5;
WkB4opt1=daysleft;
```

Chapter 5

Reactive Day Trading of the S&P 500

By using daily pattern analysis to determine our short- term trades, we accomplish several worthwhile goals. First of all, we insure that our performance as traders reflects the quality of our statistical research and not just the trend of the market. Second of all, we create a diversified portfolio of trading methods, which when united, create a lower risk profile than any one method can yield. To trade one method alone is to base our results on certain random factors and certain elements beyond our control. Finally, by entering and exiting our positions rapidly, we create an environment that will tolerate our missing a move.

As a trend follower, I cannot make an error or take time off from trading. If a signal occurs and I am not watching, I may not be able to get back into the market at the system entry price. Short term pattern trading helps solve this problem. Many of the greatest money managers trade exclusively in this fashion but will never reveal to you the basis of their success. Every statistical trader has a bunch of pet patterns that are used each time certain conditions take place. I am giving you a sample library of pet patterns, but you must have experience in other areas to make money trading this way.

One great secret of many professional traders will really shock you. They almost never use stop orders to exit losing positions. Contrary to the advice of most trading manuals, the dozen or so large fund traders that I have worked with do not use intraday protective

stops. Many use entry stops to gain advantages, as I will describe later. Traders who use protective stops end up degrading their systems. The stops tend to get triggered at the extreme price levels of the day, thus giving up positions at the very worst possible moments. A large trader with a protective stop in the market becomes extremely vulnerable to manipulative strategies. We will hang onto our trades until time runs out on our patterns. We will not use leverage that will force us out of the market upon adverse price movements. If we do use leverage, then we will buy out of the money hedging options to trade against repeatedly without requiring our using protective stops.

Without further comment, let me present you with a collection of S&P daily trading patterns that I found through extensive computerized searches of historical price behavior. So that this chapter did not turn into a mindless exercise in data mining, I have only included patterns that contain common sense reasons for their effectiveness.

The patterns are presented in a way that a professional computer based trader might use them. They need to be entered into a real time system monitoring machine such as *Tradestation*™ by **Omega Research.** When Tradestation signals that one of these patterns has fired, the code will tell you what signal has occurred and what orders you must place. Response time must be fast and furious. In cases in which entries or exits are based upon the closing price, you must know your systems' rules and not depend upon the computer alerts. A bell ringing at the close and telling you to enter your position tells you too late what you should have done. I have provided the Tradestation™ code for each pattern so that there will be no ambiguity caused by my written descriptions. Track records in this chapter can be found on pages 64-84.

(Data: All pattern work was performed using *Prophet Information Service's* adjusted continuous futures contracts for the S&P 500. The time period studied ran from 4/21/82-3/31/97. $75 in costs per trade were assumed.)

Patterns #1-2 use exits at a point after the close of the entry day. Therefore, they need to be stored on a page separate from the other patterns. These patterns make up the first charting page.

Daily Pattern #1: **The Friday/Monday Effect**

Have you ever had chills run down your spine when you've seen the market plummet on a Friday? Most of us wonder what on earth will happen on Monday when the public has had time to read about the sharp drop. This pattern capitalizes on a "weekend fear effect." When a new low is made on Friday with a large range downward slide, we have a good predictor of a gap down on Monday morning. Sell Friday at the close and get out on the following opening. With an extremely short holding period, this trade caught large chunks of the smashes of '87, '89 and '90. The profit factor clocks in at over 23 dollars won to each dollar lost. When the next bear market rolls around, this pattern should be in your arsenal. This is the code that will appear for Pattern #1 in your Tradestation software:

```
{Exit is in code. Do not set a TradeStation stop}
if dayofweek(date)=5
and open>close
and  range>range[l]
and  open<open[l]-2
and close<lowest(close,10)[l]
then sell ("Sell Dl") on close;
exitshort ("X Dl") at market;
```

Daily Pattern #2: **Countertrend Tuesday Effect**

Large hedge fund traders often call each other before the opening of the stock market to discuss their views of the impending market action. You may often hear the good ones refer to a phenomenon known as "Countertrend Tuesday." The expectation is for Tuesday to reverse the general trend of the recent market moves. This effect can be seen in many futures markets, but the S&P has one of the most pronounced effects. If Monday closes down and the trend is down as measured by our pattern, we will go long at Monday's close and play for the "Countertrend Tuesday" bounce. We will unload our contracts at Tuesday's open. The 64 winning trades this system has pulled off have returned an average gain of $642 per contract just by holding overnight. Weak players can't take positions home because the margins are high. The gains can only be captured by adequately capitalized traders. We should always be looking to take advantage of patterns

that pure day traders and pit traders do not exploit. The following code will appear in your Tradestation software for Pattern #2.

```
TradeStation code for Pattern #2:
{Exit is in code. Do not set a TradeStation stop}
if dayofweek(date)=2
and range>highest(range,3)[1]
and close>highest(close,4)[l]
and (low<low[l] or
absvalue (low-low[l])<.4)
then sell ("Sell D3") tomorrow at open tomorrow -.1 stop;
if barssinceentry=2 then exitshort ("X D3") at market;
```

(Pattern #3 goes short on an entry stop signaled after Tuesday's close.
This pattern makes up Charting page 2 and will be tracked by itself.)

Daily Pattern #3: **'Buy on the Cannons and Sell on the Trumpets'**

When Tuesday turns into a "Countertrend Tuesday" reversal day, often we would have been able to buy into the frightening collapse on Monday guided by our other patterns. To heed the commandment of the Marquis de Rothschilde, we must look to sell into the fanfare (the metaphoric trumpets) of a confirmed reversal day. When Tuesday reverses on a large range day and makes the highest closing price in four days, we will sell Wednesday on a move down from Wednesday's open for a trade. We hold this short position until the open on Monday for maximum gains. With an average winning trade of $1850 we have good reason to agree with the Marquis.

```
The following code  will appear in your Tradestation software for Pattern #3.
{Exit is in code. Do not set a TradeStation stop}
if dayofweek(date)=2
and range>highest(range,3)[1]
and close>highest(close,4)[1]
and (low<low[l] or
absvalue (low-low[l])<.4)
then sell ("Sell D3") tomorrow at open tomorrow -.1 stop;
if barssinceentry=2 then exitshort ("X D3") at market;
```

(Pattern #4-14 trade intraday and then exit at the close of the entry day. These patterns must be tracked separately from the others and will make up Charting page 3)

Daily Pattern #4: **Reaction Day Breakout**

This pattern excels at doing mechanically what many chart players try unsuccessfully to do. The code will buy at the onset of a resurgence of a rally after a reaction within this rally. Very often, using this trade, you will be buying the breakout of a reaction day high prior to a breakout of recent swing highs. This puts you on the side of stop runners who acquire positions before taking the market up to the breakout stops higher up. Play with the pros and go with the reaction day breakout trade. Note the 79% accuracy and 6.00 profit factor of this pattern.

> *The following code will appear in your Tradestation software for Pattern #4.*
> {Set TradeStation to close trade at end of day}
> if close<lowest(close,3)[1]
> and close<open
> and high[l]-high<3
> and high[l]>highest(high,3)[2]
> then buy ("Buy D4") tomorrow at high stop;

Daily Pattern #5: **Pick Up the Plunger**

Ever want to know when to step into a market that has recently experienced a sharp drop but is now rallying? Look no further. If the high two days ago is less than the low five days ago, (our drop requirement), and today's high is greater than the previous two days' highs (our rally requirement) then the first condition is met. We will then buy tomorrow on a stop at a price we calculate. Take the open tomorrow plus and add our additive factor of 45 % of the lowest one of the ranges of the past two days. This price is where you put your buy stop. With 83% accuracy on 40 trades and a profit factor of nearly 6.15, we have ourselves a killer trade. Don't miss out on the fun and games to the upside when this pattern goes into action.

The following will appear in your Tradestation software for Pattern #5.
{Set TradeStation to close trade at end of day}
value1=lowest(range,2)*.45;
if high[2]<low[5]
andhigh>highest(high,2)[1]
and close<open
then buy ("Buy D5") tomorrow at open tomorrow + value1 stop;

Daily Pattern #6: **The Fakeout Follow Up**

When the market opens above the previous day's high and then sells off so that it closes lower that previous day, we call the open a fakeout. Those who buy into the euphoria of a big open generally feel the need to sell out their positions when the positions turn into losses. The jaws of the fakeout close upon the victims. When the weak players are liquidating their losing trades at the close, we look to enter the contracts the very next day on a rally off the open of 30% of the highest range in 3 days. Historically, this trade has been good for $25,720 in profits with about 70% accuracy. The fakeout pattern must be recognized to be exploited. Incidentally, when this pattern has occurred on Tuesday, the trade has not been worth taking. The "Countertrend Tuesday Effect" distorts certain patterns so we just sidestep this day for trading them.

The following code will appear in your Tradestation software for Pattern # 6.
{Set TradeStation to close trade at end of day}
value1=highest(range,3)*.3;
if dayofweek(date)<>2
and open>high[l]
andclose<close[l]
and high-close>close-low
then buy ("Buy D6") tomorrow at open tomorrow + value1 stop;

Daily Pattern #7: **The Fuzzy Logic Variation**

This pattern provides a variation of pattern #6 but it eliminates the need for a Tuesday filter. Essentially, we require that the fakeout has taken place intraday and not off the open. Therefore, we say that if the high of today is greater than the high of the previous day, but the close is lower than the previous day's, then we have a fakeout of the buyers at the high. Now if the market stages a rally off the open the following day, we will jump in at the open plus our additive value. Note the engineering technique of using a fuzzy parameter. Rather than insist that the close be less than the close of the previous day, we loosen the parameter. We permit the close to be within .75 of the close of the day before as well as lower. In this fashion we can take advantage of our pattern to a greater degree than we could with the more restrictive version. I urge you to attempt to broaden the applications of all your pattern trades in this way.

> *The following code will appear in your Tradestation software for Pattern #7.*
>
> {Set TradeStation to close trade at end of day}
> valuel=absvalue(highest(high,2)-lowest(low,2))*1.05;
> if high>high[l]
> and (close<close[l] or
> absvalue(close-close[l])<.75)
> then buy ("Buy D7") tomorrow at open +valuel stop;

Daily Pattern #8: **Another Friday-Monday Effect**

Monday and Friday share characteristics in trading patterns. To some extent, the fact that the close of the week could look like the beginning of the week should not come as a surprise. This pattern calls upon us to buy the open on Friday or on Monday under the same circumstances. If yesterday's close is greater than the close two days ago and today's close is greater than yesterday's close and the range contracts to 3/4ths of the prior day's range, then we will buy an up opening tomorrow. To restate, if you have two up closes in a row, a range contraction and then an up opening, you buy this open on Friday or Monday. With profits of nearly $30,000, we have good reason to play this effect. I got the idea for this pattern after studying the work of a CTA and commodity author named Toby Crabel. Toby had successfully traded currencies for one of the hedge funds I worked for. This pattern is mine, not his though.

The following code will appear in your Tradestation software for Pattern #8.

```
{Set TradeStation to close trade at end of day)
If (dayofweek(date)=4 or dayofweek(date)=5)
and close[l]>close[2]
and close>close[l]
and range<range[l]*.75
and open tomorrow>close
then buy ("Buy D8") tomorrow at open tomorrow stop;
```

Daily Pattern #9: **Win/Loss Shocker**

The W/L ratio measures the size of the average winning trade divided by the size of the average losing trade. Here is a pattern that has a staggering W/L ratio of more than 3.5:1. To me, this is one of the great measures of system performance. If you see a system with very high accuracy rates but with minuscule W/L ratios, you are looking at a statistical trap. Usually a system with those characteristics is based upon a gimmicky exit strategy. Review any system or pattern you have for its W/L ratio. A W/L ratio below .50 should lead you to find something better to trade or to wait until the number improves at least. Pattern #9 looks for a day with the lowest price in three days but with a high greater than the close of the previous day. If this setup occurs on "Countertrend Tuesday" we will ignore the pattern. Buy at the open the following day plus our additive amount. *The following code will appear in your Tradestation software for Pattern #9.*

```
{Set TradeStation to close trade at end of day}
value l=range*.25;
if low<lowest(low,2)[1]
and dayofweek(date)<>2
and close<low[l]
and high>highest(low,3)[l]
and open tomorrow>close
and open >close+.5
and high>close[l]
then buy ("Buy D9") tomorrow at open tomorrow + value 1 stop;
```

Daily Pattern #10: **Leveraged Buyout**

Ever since the Monday crash in 1987, many traders have been afraid to hold positions on Mondays even when unlike 1987, Friday is not a massacre day. Sure, another Monday crash might occur some day, but a tremendous statistical anomaly has developed because of the exaggerated fear. When the low on Friday is greater than the high two trading days before, and the range is less than 95% of the range of the day before, we will buy a rally on Monday off the open at the open plus 60% of the lowest two day range. With a profit factor of 4.45, the pattern gives us ample reason fade the fear mongers and perform a leveraged S&P buyout. Don't forget to use our option hedging strategy with your leveraged trades. *The following code will appear in your Tradestation software for Pattern #10.*

```
{Set TradeStation to close trade at end of day }
valuel=lowest(range,2)*.6;
if low>high[2]
and dayofweek(date)=5
and  range<range[l]*.95
then buy ("Buy D10") tomorrow at open tomorrow + valuel  stop;
```

Daily Pattern #11: **Early Bird Specials**

The trader who specializes in short term reversals should be an early bird. By this I mean that historically, the market has recovered from selling pressures early in the week. By Friday, when everyone has caught on to the fact that the market reverses from selling waves, the market will often destroy the newcomers buying dips. According to Abraham Lincoln, "good things come to those who wait, but only those things left by those who hurried." If the market gets oversold before Thursday as defined by the daily high being less than the low two days ago minus a point or so, and the range contacts to less than % of the previous day, then our setup pattern exists.   We will then buy tomorrow at the open plus 45% of the range today. With an average winning trade of $950 and 6.21 profit factor on 48 trades, who would argue with Honest Abe?
The following code will appear in your Tradestation software for Pattern #11.

```
{Set TradeStation to close trade at end of day}
valuel =range*.45;
```

```
if high<low[2]-.70
and dayofweek(date)<4
and range<range[l]*.75
then buy ("Buy Dll") tomorrow at open tomorrow + value 1 stop;
```

Daily Pattern #12: **Tuesday/Friday Correlation**

Observant traders may have taken notice of the fact that Friday and Tuesday have a higher correlation with each other than any other two days of the week over many test periods. While I wouldn't buy on Friday just because Tuesday was up, I would trade patterns that have followed the same activity on Tuesday or Friday. If either of these two days witnesses a range less than the average range of the past three days and the high of the day is greater than the previous day's close, we will buy at the open the following day. This trade hit 18 times in a row at one point and has racked up nearly $41,000 for its followers. *The following code will appear in your Tradestation software for Pattern #12.*

```
TradeStation code for Pattern #12:
{Set TradeStation to close trade at end of day)
if (dayofweek(date)=2 or dayofweek(date)=5)
and range<average(range,3)[l]
and high<close[l]
then buy ("Buy D12") tomorrow at open tomorrow stop;
```

Daily Pattern #13: **Streaking**

Want to know about a pattern that has hit a winning streak of 22 trades in a row and has hit the money 87% of the time? I am hesitant to give this pattern away, but here goes.. .Using our early bird strategy, we look for a day early in the week with the lowest closing price in 3 days and a range greater than the range of the day before. Once this condition is met, we ask if the low yesterday is less than the low 2 days ago. If the open tomorrow is less than the low 1 day ago but greater than the low by .50 points, then we buy tomorrow at the low 1 day ago plus one tick. The track record speaks for itself. You would probably have to search through all possible patterns to find something with a stronger record.

The following code will appear in your Tradestation software for Pattern #13.

```
{Set TradeStation to close trade at end of day}
if low<lowest(low,2)[1]
and  dayofweek(Date)<4
and  low[l]<low[2]
and  open  tomorrow<low[l]
and range>range[l]
and  open  tomorrow>low+.50
```
then buy ("Buy D13") tomorrow at low[l] + 1 point stop;

Daily Pattern #14: **Short Sale Filter**

This pattern code searches for excessive optimism in the S&P contracts. This is one of the simpler patterns that savvy traders have been able to exploit over and over again. Wait for a Tuesday to close higher than Monday. If it does, and Wednesday opens above the highest price reached in 3 days, then short the S&P on the first .50 drop. When the S&P gets overextended in the middle of the week, reversals are quite common. I would always wait for the market to start down as this pattern demands. If you don't wait, you might end up shorting a gap day that never looks back. With 75% accuracy on 36 trades, this short sale sequence is worth trading.

The following code will appear in your Tradestation software for Pattern #13.

```
{Set TradeStation to close trade at end of day}
if dayofweek(date)=2
and close>close[l]
and  open  tomorrow>highest(high,3)
then sell ("Sell D14") tomorrow at open tomorrow-.50 stop;
```

```
book pats4-14  CCSP99A.ASC-Daily   04/21/82 - 10/31/96
```

Performance Summary: All Trades

Total net profit	$ 228740.00	Open position P/L	$ 0.00
Gross profit	$ 293925.00	Gross loss	$ -65185.00
Total # of trades	417	Percent profitable	72%
Number winning trades	302	Number losing trades	115
Largest winning trade	$ 5025.00	Largest losing trade	$ -3275.00
Average winning trade	$ 973.26	Average losing trade	$ -566.83
Ratio avg win/avg loss	1.72	Avg trade(win & loss)	$ 548.54
Max consec. winners	18	Max consec. losers	6
Avg # bars in winners	0	Avg # bars in losers	0
Max intraday drawdown	$ -5725.00		
Profit factor	4.51	Max # contracts held	1
Account size required	$ 5725.00	Return on account	3995%

Performance Summary: Long Trades

Total net profit	$ 213060.00	Open position P/L	$ 0.00
Gross profit	$ 273575.00	Gross loss	$ -60515.00
Total # of trades	392	Percent profitable	73%
Number winning trades	285	Number losing trades	107
Largest winning trade	$ 5025.00	Largest losing trade	$ -3275.00
Average winning trade	$ 959.91	Average losing trade	$ -565.56
Ratio avg win/avg loss	1.70	Avg trade(win & loss)	$ 543.52
Max consec. winners	18	Max consec. losers	5
Avg # bars in winners	0	Avg # bars in losers	0
Max intraday drawdown	$ -5725.00		
Profit factor	4.52	Max # contracts held	1
Account size required	$ 5725.00	Return on account	3722%

Performance Summary: Short Trades

Total net profit	$ 15680.00	Open position P/L	$ 0.00
Gross profit	$ 20350.00	Gross loss	$ -4670.00
Total # of trades	25	Percent profitable	68%
Number winning trades	17	Number losing trades	8
Largest winning trade	$ 3725.00	Largest losing trade	$ -1250.00
Average winning trade	$ 1197.06	Average losing trade	$ -583.75
Ratio avg win/avg loss	2.05	Avg trade(win & loss)	$ 627.20
Max consec. winners	8	Max consec. losers	2
Avg # bars in winners	0	Avg # bars in losers	0
Max intraday drawdown	$ -2925.00		
Profit factor	4.36	Max # contracts held	1
Account size required	$ 2925.00	Return on account	536%

```
book pats4-14  CCSP99A.ASC-Daily  04/21/82 - 10/31/96
Date    Time   Type  Cnts   Price  Signal Name        Entry P/L  Cumulative
05/06/82        Buy   1     228.40 Buy D5
05/06/82        LExit 1     229.05 End of Day Ex $      250.00 $     250.00
05/21/82        Sell  1     225.20 Sell D14
05/21/82        SExit 1     224.85 End of Day Ex $      100.00 $     350.00
06/11/82        Buy   1     220.85 Buy D7
06/11/82        LExit 1     221.40 End of Day Ex $      200.00 $     550.00
07/06/82        Buy   1     220.45 Buy D12
07/06/82        LExit 1     221.45 End of Day Ex $      425.00 $     975.00
07/12/82        Buy   1     224.95 Buy D8
07/12/82        LExit 1     224.30 End of Day Ex $     -400.00 $     575.00
07/16/82        Buy   1     226.50 Buy D6
07/16/82        LExit 1     226.15 End of Day Ex $     -250.00 $     325.00
07/20/82        Buy   1     225.60 Buy D9
07/20/82        LExit 1     226.25 End of Day Ex $      250.00 $     575.00
08/17/82        Buy   1     216.95 Buy D6
08/17/82        LExit 1     220.35 End of Day Ex $     1625.00 $    2200.00
08/19/82        Buy   1     221.70 Buy D6
08/19/82        LExit 1     221.30 End of Day Ex $     -275.00 $    1925.00
08/30/82        Buy   1     227.80 Buy D12
08/30/82        LExit 1     230.05 End of Day Ex $     1050.00 $    2975.00
09/27/82        Buy   1     234.70 Buy D12
09/27/82        LExit 1     236.32 End of Day Ex $      735.00 $    3710.00
10/06/82        Buy   1     236.35 Buy D7
10/06/82        LExit 1     237.82 End of Day Ex $      660.00 $    4370.00
10/08/82        Buy   1     243.05 Buy D8
10/08/82        LExit 1     244.37 End of Day Ex $      585.00 $    4955.00
11/30/82        Buy   1     246.95 Buy D5
11/30/82        LExit 1     250.92 End of Day Ex $     1910.00 $    6865.00
12/02/82        Buy   1     252.95 Buy D6
12/02/82        LExit 1     251.12 End of Day Ex $     -990.00 $    5875.00
12/06/82        Buy   1     254.70 Buy D7
12/06/82        LExit 1     255.62 End of Day Ex $      385.00 $    6260.00
12/29/82        Buy   1     254.15 Buy D12
12/29/82        LExit 1     254.61 End of Day Ex $      155.00 $    6415.00
01/04/83        Buy   1     251.85 Buy D6
01/04/83        LExit 1     254.11 End of Day Ex $     1055.00 $    7470.00
01/10/83        Buy   1     259.85 Buy D10
01/10/83        LExit 1     260.31 End of Day Ex $      155.00 $    7625.00
01/14/83        Buy   1     260.15 Buy D8
01/14/83        LExit 1     259.71 End of Day Ex $     -295.00 $    7330.00
01/24/83        Buy   1     254.15 Buy D12
01/24/83        LExit 1     253.26 End of Day Ex $     -520.00 $    6810.00
01/26/83        Buy   1     254.05 Buy D11
01/26/83        LExit 1     253.76 End of Day Ex $     -220.00 $    6590.00
01/31/83        Buy   1     257.60 Buy D5
01/31/83        LExit 1     258.81 End of Day Ex $      530.00 $    7120.00
02/10/83        Buy   1     259.40 Buy D11
02/10/83        LExit 1     261.61 End of Day Ex $     1030.00 $    8150.00
02/14/83        Buy   1     261.50 Buy D6
02/14/83        LExit 1     262.56 End of Day Ex $      455.00 $    8605.00
02/17/83        Buy   1     260.75 Buy D9
02/17/83        LExit 1     260.66 End of Day Ex $     -120.00 $    8485.00
02/22/83        Buy   1     260.95 Buy D8
02/22/83        LExit 1     257.86 End of Day Ex $    -1620.00 $    6865.00
03/18/83        Sell  1     261.45 Sell D14
03/18/83        SExit 1     262.20 End of Day Ex $     -450.00 $    6415.00
04/11/83        Buy   1     266.00 Buy D7
04/11/83        LExit 1     266.95 End of Day Ex $      400.00 $    6815.00
04/18/83        Buy   1     270.70 Buy D10
04/18/83        LExit 1     270.90 End of Day Ex $       25.00 $    6840.00
04/20/83        Buy   1     270.05 Buy D12
04/20/83        LExit 1     272.05 End of Day Ex $      925.00 $    7765.00
05/06/83        Buy   1     276.85 Buy D8
05/06/83        LExit 1     279.35 End of Day Ex $     1175.00 $    8940.00
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book pats4-14  CCSP99A.ASC-Daily    04/21/82 - 10/31/96
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Date	Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
06/06/83		Buy	1	277.45	Buy D10		
06/06/83		LExit	1	277.30	End of Day Ex $	-150.00 $	8790.00
06/13/83		Buy	1	275.95	Buy D8		
06/13/83		LExit	1	277.20	End of Day Ex $	550.00 $	9340.00
06/20/83		Buy	1	282.15	Buy D10		
06/20/83		LExit	1	280.75	End of Day Ex $	-775.00 $	8565.00
07/01/83		Sell	1	280.35	Sell D14		
07/01/83		SExit	1	280.35	Buy D8	$ -75.00 $	8490.00
07/01/83		Buy	1	280.35	Buy D8		
07/01/83		LExit	1	280.30	End of Day Ex $	-100.00 $	8390.00
07/06/83		Buy	1	278.00	Buy D12		
07/06/83		LExit	1	279.85	End of Day Ex $	850.00 $	9240.00
07/14/83		Buy	1	278.30	Buy D11		
07/14/83		LExit	1	277.15	End of Day Ex $	-650.00 $	8590.00
07/25/83		Buy	1	279.60	Buy D12		
07/25/83		LExit	1	281.20	End of Day Ex $	725.00 $	9315.00
08/01/83		Buy	1	273.55	Buy D12		
08/01/83		LExit	1	273.15	End of Day Ex $	-275.00 $	9040.00
09/02/83		Buy	1	275.35	Buy D6		
09/02/83		LExit	1	275.40	End of Day Ex $	-50.00 $	8990.00
09/14/83		Buy	1	275.40	Buy D11		
09/14/83		LExit	1	275.55	End of Day Ex $	0.00 $	8990.00
09/16/83		Buy	1	274.90	Buy D9		
09/16/83		LExit	1	276.83	End of Day Ex $	890.00 $	9880.00
10/10/83		Buy	1	280.05	Buy D10		
10/10/83		LExit	1	281.93	End of Day Ex $	865.00 $	10745.00
10/14/83		Sell	1	280.08	Sell D14		
10/14/83		SExit	1	279.53	End of Day Ex $	200.00 $	10945.00
10/28/83		Sell	1	275.33	Sell D14		
10/28/83		SExit	1	273.23	End of Day Ex $	975.00 $	11920.00
11/07/83		Buy	1	271.90	Buy D12		
11/07/83		LExit	1	271.33	End of Day Ex $	-360.00 $	11560.00
11/11/83		Buy	1	274.20	Buy D8		
11/11/83		LExit	1	275.73	End of Day Ex $	690.00 $	12250.00
11/29/83		Buy	1	274.95			
11/29/83		LExit	1	276.63	End of Day Ex $	765.00 $	13015.00
12/01/83		Buy	1	275.05	Buy D6		
12/01/83		LExit	1	275.33	End of Day Ex $	65.00 $	13080.00
12/05/83		Buy	1	273.75	Buy D12		
12/05/83		LExit	1	274.68	End of Day Ex $	390.00 $	13470.00
12/30/83		Buy	1	272.40	Buy D6		
12/30/83		LExit	1	272.30	End of Day Ex $	-125.00 $	13345.00
01/16/84		Buy	1	274.85	Buy D9		
01/16/84		LExit	1	274.55	End of Day Ex $	-225.00 $	13120.00
01/23/84		Buy	1	273.00	Buy D12		
01/23/84		LExit	1	272.00	End of Day Ex $	-575.00 $	12545.00
02/07/84		Buy	1	265.90	Buy D11		
02/07/84		LExit	1	265.25	End of Day Ex $	-400.00 $	12145.00
02/29/84		Buy	1	263.20	Buy D12		
02/29/84		LExit	1	262.15	End of Day Ex $	-600.00 $	11545.00
03/02/84		Sell	1	264.30	Sell D14		
03/02/84		SExit	1	264.45	End of Day Ex $	-150.00 $	11395.00
03/08/84		Buy	1	260.45	Buy D11		
03/08/84		LExit	1	260.70	End of Day Ex $	50.00 $	11445.00
03/12/84		Buy	1	260.45	Buy D12		
03/12/84		LExit	1	261.65	End of Day Ex $	525.00 $	11970.00
03/14/84		Buy	1	262.05	Buy D5		
03/14/84		LExit	1	261.85	End of Day Ex $	-175.00 $	11795.00
03/16/84		Buy	1	264.10	Buy D7		
03/16/84		LExit	1	263.01	End of Day Ex $	-620.00 $	11175.00
04/12/84		Buy	1	258.90	Buy D9		
04/12/84		LExit	1	261.41	End of Day Ex $	1180.00 $	12355.00
04/16/84		Buy	1	261.70	Buy D10		
04/16/84		LExit	1	262.11	End of Day Ex $	130.00 $	12485.00

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book pats4-14  CCSP99A.ASC-Daily   04/21/82 - 10/31/96
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Date	Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
05/08/84		Buy	1	262.65	Buy D11		
05/08/84		LExit	1	263.01	End of Day Ex $	105.00 $	12590.00
05/23/84		Buy	1	256.55	Buy D12		
05/23/84		LExit	1	255.26	End of Day Ex $	-720.00 $	11870.00
06/01/84		Buy	1	253.55	Buy D8		
06/01/84		LExit	1	255.01	End of Day Ex $	655.00 $	12525.00
07/25/84		Buy	1	247.80			
07/25/84		LExit	1	248.54	End of Day Ex $	295.00 $	12820.00
08/09/84		Buy	1	263.05	Buy D6		
08/09/84		LExit	1	265.79	End of Day Ex $	1295.00 $	14115.00
08/13/84		Buy	1	265.80	Buy D6		
08/13/84		LExit	1	265.19	End of Day Ex $	-380.00 $	13735.00
08/21/84		Buy	1	266.50	Buy D7		
08/21/84		LExit	1	268.19	End of Day Ex $	770.00 $	14505.00
09/06/84		Buy	1	264.70	Buy D11		
09/06/84		LExit	1	264.79	End of Day Ex $	-30.00 $	14475.00
09/10/84		Buy	1	262.70	Buy D5		
09/10/84		LExit	1	263.59	End of Day Ex $	370.00 $	14845.00
10/04/84		Buy	1	261.20	Buy D11		
10/04/84		LExit	1	260.96	End of Day Ex $	-195.00 $	14650.00
10/12/84		Sell	1	260.71	Sell D14		
10/12/84		SExit	1	260.75	Buy D8	$ -95.00 $	14555.00
10/12/84		Buy	1	260.75	Buy D8		
10/12/84		LExit	1	261.46	End of Day Ex $	280.00 $	14835.00
10/15/84		Buy	1	262.20	Buy D10		
10/15/84		LExit	1	263.01	End of Day Ex $	330.00 $	15165.00
10/29/84		Buy	1	262.40	Buy D12		
10/29/84		LExit	1	261.81	End of Day Ex $	-370.00 $	14795.00
11/06/84		Buy	1	266.60	Buy D7		
11/06/84		LExit	1	267.06	End of Day Ex $	155.00 $	14950.00
11/09/84		Sell	1	265.51	Sell D14		
11/09/84		SExit	1	262.76	End of Day Ex $	1300.00 $	16250.00
11/14/84		Buy	1	262.40			
11/14/84		LExit	1	261.61	End of Day Ex $	-470.00 $	15780.00
11/23/84		Buy	1	261.90	Buy D7		
11/23/84		LExit	1	262.21	End of Day Ex $	80.00 $	15860.00
12/06/84		Buy	1	257.45	Buy D9		
12/06/84		LExit	1	257.41	End of Day Ex $	-95.00 $	15765.00
12/28/84		Buy	1	259.35	Buy D9		
12/28/84		LExit	1	259.52	End of Day Ex $	10.00 $	15775.00
01/14/85		Buy	1	260.70	Buy D10		
01/14/85		LExit	1	262.47	End of Day Ex $	810.00 $	16585.00
01/29/85		Buy	1	270.35	Buy D7		
01/29/85		LExit	1	270.87	End of Day Ex $	185.00 $	16770.00
02/04/85		Buy	1	268.40	Buy D12		
02/04/85		LExit	1	270.47	End of Day Ex $	960.00 $	17730.00
02/11/85		Buy	1	272.45	Buy D8		
02/11/85		LExit	1	270.07	End of Day Ex $	-1265.00 $	16465.00
03/19/85		Buy	1	265.70			
03/19/85		LExit	1	267.65	End of Day Ex $	900.00 $	17365.00
03/27/85		Buy	1	267.55	Buy D7		
03/27/85		LExit	1	266.95	End of Day Ex $	-375.00 $	16990.00
04/08/85		Sell	1	265.65	Sell D14		
04/08/85		SExit	1	263.85	End of Day Ex $	825.00 $	17815.00
05/07/85		Buy	1	265.20	Buy D5		
05/07/85		LExit	1	265.45	End of Day Ex $	50.00 $	17865.00
05/31/85		Buy	1	273.75	Buy D7		
05/31/85		LExit	1	273.50	End of Day Ex $	-200.00 $	17665.00
06/06/85		Buy	1	274.10	Buy D6		
06/06/85		LExit	1	275.50	End of Day Ex $	625.00 $	18290.00
07/05/85		Buy	1	277.25	Buy D4		
07/05/85		LExit	1	277.46	End of Day Ex $	30.00 $	18320.00
07/16/85		Buy	1	278.25	Buy D4		
07/16/85		LExit	1	279.46	End of Day Ex $	530.00 $	18850.00

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book pats4-14  CCSP99A.ASC-Daily   04/21/82 - 10/31/96
Date     Time    Type  Cnts    Price  Signal Name       Entry P/L  Cumulative
07/31/85          Buy    1     274.00 Buy D11
07/31/85          LExit  1     273.96 End of Day Ex $     -95.00 $  18755.00
08/08/85          Buy    1     271.70 Buy D11
08/08/85          LExit  1     271.71 End of Day Ex $     -70.00 $  18685.00
08/12/85          Buy    1     271.70 Buy D5
08/12/85          LExit  1     270.86 End of Day Ex $    -495.00 $  18190.00
08/13/85          Buy    1     271.10 Buy D5
08/13/85          LExit  1     270.86 End of Day Ex $    -195.00 $  17995.00
08/20/85          Buy    1     270.90 Buy D7
08/20/85          LExit  1     271.96 End of Day Ex $     455.00 $  18450.00
10/01/85          Buy    1     263.75 Buy D5
10/01/85          LExit  1     267.31 End of Day Ex $    1705.00 $  20155.00
10/07/85          Buy    1     263.65 Buy D12
10/07/85          LExit  1     264.01 End of Day Ex $     105.00 $  20260.00
10/11/85          Buy    1     264.45 Buy D8
10/11/85          LExit  1     266.51 End of Day Ex $     955.00 $  21215.00
10/28/85          Buy    1     268.05 Buy D12
10/28/85          LExit  1     268.91 End of Day Ex $     355.00 $  21570.00
10/29/85          Buy    1     269.45 Buy D7
10/29/85          LExit  1     270.26 End of Day Ex $     330.00 $  21900.00
11/21/85          Buy    1     282.95 Buy D7
11/21/85          LExit  1     282.61 End of Day Ex $    -245.00 $  21655.00
11/27/85          Buy    1     283.75 Buy D7
11/27/85          LExit  1     284.56 End of Day Ex $     330.00 $  21985.00
12/27/85          Sell   1     288.76 Sell D14
12/27/85          SExit  1     290.21 End of Day Ex $    -800.00 $  21185.00
01/03/86          Buy    1     290.10 Buy D4
01/03/86          LExit  1     290.96 End of Day Ex $     355.00 $  21540.00
01/07/86          Buy    1     294.20 Buy D7
01/07/86          LExit  1     294.06 End of Day Ex $    -145.00 $  21395.00
01/15/86          Buy    1     286.10 Buy D5
01/15/86          LExit  1     286.96 End of Day Ex $     355.00 $  21750.00
01/20/86          Buy    1     286.10 Buy D6
01/20/86          LExit  1     286.36 End of Day Ex $      55.00 $  21805.00
02/18/86          Buy    1     300.60 Buy D10
02/18/86          LExit  1     301.21 End of Day Ex $     230.00 $  22035.00
02/26/86          Buy    1     301.95
02/26/86          LExit  1     302.66 End of Day Ex $     280.00 $  22315.00
03/31/86          Buy    1     316.65 Buy D8
03/31/86          LExit  1     315.15 End of Day Ex $    -825.00 $  21490.00
04/08/86          Buy    1     306.20 Buy D11
04/08/86          LExit  1     309.75 End of Day Ex $    1700.00 $  23190.00
04/10/86          Buy    1     311.10 Buy D6
04/10/86          LExit  1     312.20 End of Day Ex $     475.00 $  23665.00
04/16/86          Buy    1     316.90 Buy D7
04/16/86          LExit  1     318.35 End of Day Ex $     650.00 $  24315.00
05/20/86          Buy    1     309.30 Buy D7
05/20/86          LExit  1     311.00 End of Day Ex $     775.00 $  25090.00
05/22/86          Buy    1     311.95 Buy D5
05/22/86          LExit  1     315.75 End of Day Ex $    1825.00 $  26915.00
05/27/86          Buy    1     317.05 Buy D8
05/27/86          LExit  1     320.50 End of Day Ex $    1650.00 $  28565.00
06/11/86          Buy    1     314.35 Buy D11
06/11/86          LExit  1     314.85 End of Day Ex $     175.00 $  28740.00
06/13/86          Buy    1     316.45 Buy D8
06/13/86          LExit  1     320.40 End of Day Ex $    1900.00 $  30640.00
06/30/86          Buy    1     324.50 Buy D8
06/30/86          LExit  1     326.00 End of Day Ex $     675.00 $  31315.00
07/09/86          Buy    1     316.05 Buy D12
07/09/86          LExit  1     316.60 End of Day Ex $     200.00 $  31515.00
07/30/86          Buy    1     310.00 Buy D11
07/30/86          LExit  1     311.45 End of Day Ex $     650.00 $  32165.00
08/15/86          Buy    1     321.35 Buy D8
08/15/86          LExit  1     321.80 End of Day Ex $     150.00 $  32315.00
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book pats4-14   CCSP99A.ASC-Daily   04/21/82 - 10/31/96
Date      Time      Type   Cnts    Price  Signal Name      Entry P/L   Cumulative
08/20/86            Buy    1       322.35 Buy D4
08/20/86            LExit  1       324.50 End of Day Ex $   1000.00 $   33315.00
08/26/86            Buy    1       324.05 Buy D4
08/26/86            LExit  1       327.50 End of Day Ex $   1650.00 $   34965.00
09/04/86            Buy    1       326.55 Buy D11
09/04/86            LExit  1       328.20 End of·Day Ex $    750.00 $   35715.00
09/16/86            Buy    1       303.10 Buy D11
09/16/86            LExit  1       304.15 End of Day Ex $    450.00 $   36165.00
09/18/86            Buy    1       304.45 Buy D5
09/18/86            LExit  1       304.80 End of Day Ex $    100.00 $   36265.00
09/22/86            Buy    1       306.40 Buy D8
09/22/86            LExit  1       310.06 End of Day Ex $   1755.00 $   38020.00
10/03/86            Buy    1       311.00 Buy D8
10/03/86            LExit  1       307.86 End of Day Ex $  -1645.00 $   36375.00
10/06/86            Buy    1       310.50 Buy D6
10/06/86            LExit  1       309.56 End of Day Ex $   -545.00 $   35830.00
10/20/86            Buy    1       311.90 Buy D12
10/20/86            LExit  1       310.96 End of Day Ex $   -545.00 $   35285.00
10/23/86            Buy    1       313.90 Buy D7
10/23/86            LExit  1       315.06 End of Day Ex $    505.00 $   35790.00
10/27/86            Buy    1       314.80 Buy D10
10/27/86            LExit  1       314.66 End of Day Ex $   -145.00 $   35645.00
11/20/86            Buy    1       315.85 Buy D11
11/20/86            LExit  1       317.66 End of Day Ex $    830.00 $   36475.00
01/19/87            Buy    1       342.95 Buy D6
01/19/87            LExit  1       347.84 End of Day Ex $   2370.00 $   38845.00
02/11/87            Buy    1       354.15
02/11/87            LExit  1       354.09 End of Day Ex $   -105.00 $   38740.00
03/12/87            Buy    1       368.15 Buy D6
03/12/87            LExit  1       367.29 End of Day Ex $   -505.00 $   38235.00
03/19/87            Buy    1       370.80 Buy D5
03/19/87            LExit  1       370.64 End of Day Ex $   -155.00 $   38080.00
04/01/87            Buy    1       361.15 Buy D11
04/01/87            LExit  1       365.39 End of Day Ex $   2045.00 $   40125.00
04/03/87            Buy    1       365.55 Buy D5
04/03/87            LExit  1       374.29 End of Day Ex $   4295.00 $   44420.00
04/27/87            Buy    1       347.85 Buy D12
04/27/87            LExit  1       351.34 End of Day Ex $   1670.00 $   46090.00
05/12/87            Buy    1       362.85
05/12/87            LExit  1       365.29 End of Day Ex $   1145.00 $   47235.00
05/22/87            Buy    1       353.05 Buy D8
05/22/87            LExit  1       352.64 End of Day Ex $   -280.00 $   46955.00
05/26/87            Buy    1       357.70 Buy D5
05/26/87            LExit  1       360.44 End of Day Ex $   1295.00 $   48250.00
06/22/87            Buy    1       378.45 Buy D8
06/22/87            LExit  1       381.19 End of Day Ex $   1295.00 $   49545.00
07/02/87            Buy    1       375.85 Buy D11
07/02/87            LExit  1       375.39 End of Day Ex $   -305.00 $   49240.00
07/07/87            Buy    1       375.50 Buy D5
07/07/87            LExit  1       378.44 End of Day Ex $   1395.00 $   50635.00
07/17/87            Buy    1       382.95 Buy D8
07/17/87            LExit  1       383.34 End of Day Ex $    120.00 $   50755.00
08/03/87            Buy    1       387.45 Buy D10
08/03/87            LExit  1       387.34 End of Day Ex $   -130.00 $   50625.00
08/05/87            Buy    1       388.00 Buy D4
08/05/87            LExit  1       387.69 End of Day Ex $   -230.00 $   50395.00
08/10/87            Buy    1       394.05 Buy D8
08/10/87            LExit  1       397.89 End of Day Ex $   1845.00 $   52240.00
08/20/87            Buy    1       403.00 Buy D11
08/20/87            LExit  1       405.14 End of Day Ex $    995.00 $   53235.00
09/18/87            Sell   1       385.04 Sell D14
09/18/87            SExit  1       383.89 End of Day Ex $    500.00 $   53735.00
09/22/87            Buy    1       379.80 Buy D5
09/22/87            LExit  1       389.54 End of Day Ex $   4795.00 $   58530.00
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book pats4-14  CCSP99A.ASC-Daily   04/21/82 - 10/31/96
Date     Time   Type   Cnts   Price   Signal Name      Entry P/L    Cumulative
11/04/87        Buy    1      317.05
11/04/87        LExit  1      315.69  End of Day Ex $    -755.00 $   57775.00
11/11/87        Buy    1      306.55  Buy D12
11/11/87        LExit  1      307.74  End of Day Ex $     520.00 $   58295.00
11/18/87        Buy    1      312.05  Buy D11
11/18/87        LExit  1      312.09  End of Day Ex $     -55.00 $   58240.00
12/02/87        Buy    1      298.80  Buy D11
12/02/87        LExit  1      298.59  End of Day Ex $    -180.00 $   58060.00
12/18/87        Buy    1      314.45  Buy D4
12/18/87        LExit  1      312.84  End of Day Ex $    -880.00 $   57180.00
12/23/87        Buy    1      317.40  Buy D12
12/23/87        LExit  1      319.09  End of Day Ex $     770.00 $   57950.00
12/30/87        Buy    1      312.85  Buy D11
12/30/87        LExit  1      314.59  End of Day Ex $     795.00 $   58745.00
01/13/88        Buy    1      309.25  Buy D12
01/13/88        LExit  1      310.64  End of Day Ex $     620.00 $   59365.00
01/22/88        Sell   1      310.19  Sell D14
01/22/88        SExit  1      312.49  End of Day Ex $   -1225.00 $   58140.00
01/25/88        Buy    1      313.00  Buy D8
01/25/88        LExit  1      317.04  End of Day Ex $    1945.00 $   60085.00
02/19/88        Buy    1      325.15  Buy D4
02/19/88        LExit  1      327.34  End of Day Ex $    1020.00 $   61105.00
03/18/88        Buy    1      335.60  Buy D8
03/18/88        LExit  1      335.04  End of Day Ex $    -355.00 $   60750.00
03/31/88        Buy    1      321.45  Buy D5
03/31/88        LExit  1      321.79  End of Day Ex $      95.00 $   60845.00
04/08/88        Buy    1      330.75  Buy D8
04/08/88        LExit  1      332.64  End of Day Ex $     870.00 $   61715.00
04/19/88        Buy    1      325.95  Buy D7
04/19/88        LExit  1      320.04  End of Day Ex $   -3030.00 $   58685.00
05/13/88        Sell   1      317.94  Sell D14
05/13/88        SExit  1      320.29  End of Day Ex $   -1250.00 $   57435.00
05/20/88        Sell   1      316.64  Sell D14
05/20/88        SExit  1      315.44  End of Day Ex $     525.00 $   57960.00
05/26/88        Buy    1      317.90  Buy D6
05/26/88        LExit  1      318.34  End of Day Ex $     145.00 $   58105.00
05/31/88        Buy    1      316.35  Buy D12
05/31/88        LExit  1      325.69  End of Day Ex $    4595.00 $   62700.00
06/28/88        Buy    1      335.65
06/28/88        LExit  1      335.69  End of Day Ex $     -55.00 $   62645.00
07/05/88        Buy    1      333.90  Buy D6
07/05/88        LExit  1      339.49  End of Day Ex $    2720.00 $   65365.00
07/15/88        Buy    1      332.80  Buy D8
07/15/88        LExit  1      333.64  End of Day Ex $     345.00 $   65710.00
07/28/88        Buy    1      325.30  Buy D9
07/28/88        LExit  1      327.69  End of Day Ex $    1120.00 $   66830.00
08/05/88        Buy    1      333.20  Buy D6
08/05/88        LExit  1      333.04  End of Day Ex $    -155.00 $   66675.00
08/24/88        Buy    1      319.05  Buy D11
08/24/88        LExit  1      322.59  End of Day Ex $    1695.00 $   68370.00
09/08/88        Buy    1      327.65  Buy D6
09/08/88        LExit  1      326.94  End of Day Ex $    -430.00 $   67940.00
10/07/88        Buy    1      334.70  Buy D8
10/07/88        LExit  1      339.34  End of Day Ex $    2245.00 $   70185.00
10/14/88        Sell   1      336.99  Sell D14
10/14/88        SExit  1      335.39  End of Day Ex $     725.00 $   70910.00
10/17/88        Buy    1      336.20  Buy D6
10/17/88        LExit  1      336.74  End of Day Ex $     195.00 $   71105.00
11/15/88        Buy    1      327.75  Buy D11
11/15/88        LExit  1      327.99  End of Day Ex $      45.00 $   71150.00
11/28/88        Buy    1      326.60  Buy D12
11/28/88        LExit  1      327.44  End of Day Ex $     345.00 $   71495.00
12/05/88        Buy    1      331.20  Buy D12
12/05/88        LExit  1      334.39  End of Day Ex $    1520.00 $   73015.00
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book pats4-14   CCSP99A.ASC-Daily   04/21/82 - 10/31/96
Date      Time    Type   Cnts    Price  Signal Name      Entry P/L   Cumulative
01/04/89          Buy    1      334.90
01/04/89          LExit  1      337.45 End of Day Ex $   1200.00 $    74215.00
01/06/89          Buy    1      338.05 Buy D8
01/06/89          LExit  1      337.95 End of Day Ex $   -125.00 $    74090.00
01/16/89          Buy    1      341.45 Buy D8
01/16/89          LExit  1      341.25 End of Day Ex $   -175.00 $    73915.00
01/18/89          Buy    1      340.85 Buy D12
01/18/89          LExit  1      343.25 End of Day Ex $   1125.00 $    75040.00
01/24/89          Buy    1      342.05
01/24/89          LExit  1      344.85 End of Day Ex $   1325.00 $    76365.00
02/17/89          Buy    1      350.85 Buy D8
02/17/89          LExit  1      352.35 End of Day Ex $    675.00 $    77040.00
02/28/89          Buy    1      344.75 Buy D11
02/28/89          LExit  1      344.20 End of Day Ex $   -350.00 $    76690.00
03/02/89          Buy    1      343.75 Buy D5
03/02/89          LExit  1      345.40 End of Day Ex $    750.00 $    77440.00
03/06/89          Buy    1      347.20 Buy D8
03/06/89          LExit  1      349.70 End of Day Ex $   1175.00 $    78615.00
04/14/89          Buy    1      352.70 Buy D4
04/14/89          LExit  1      354.50 End of Day Ex $    825.00 $    79440.00
04/18/89          Buy    1      358.05 Buy D7
04/18/89          LExit  1      358.80 End of Day Ex $    300.00 $    79740.00
04/27/89          Buy    1      360.35 Buy D4
04/27/89          LExit  1      361.95 End of Day Ex $    725.00 $    80465.00
05/01/89          Buy    1      360.70 Buy D10
05/01/89          LExit  1      361.95 End of Day Ex $    550.00 $    81015.00
05/17/89          Buy    1      368.20 Buy D12
05/17/89          LExit  1      369.55 End of Day Ex $    600.00 $    81615.00
05/19/89          Buy    1      371.30 Buy D8
05/19/89          LExit  1      373.35 End of Day Ex $    950.00 $    82565.00
05/25/89          Buy    1      370.55 Buy D11
05/25/89          LExit  1      371.25 End of Day Ex $    275.00 $    82840.00
05/26/89          Buy    1      372.40 Buy D7
05/26/89          LExit  1      373.00 End of Day Ex $    225.00 $    83065.00
05/31/89          Buy    1      371.65 Buy D5
05/31/89          LExit  1      371.85 End of Day Ex $     25.00 $    83090.00
06/19/89          Buy    1      368.60 Buy D12
06/19/89          LExit  1      368.96 End of Day Ex $    105.00 $    83195.00
07/19/89          Buy    1      377.85 Buy D12
07/19/89          LExit  1      380.81 End of Day Ex $   1405.00 $    84600.00
07/28/89          Buy    1      387.55 Buy D8
07/28/89          LExit  1      386.86 End of Day Ex $   -420.00 $    84180.00
07/31/89          Buy    1      388.20 Buy D10
07/31/89          LExit  1      390.86 End of Day Ex $   1255.00 $    85435.00
08/07/89          Buy    1      391.95 Buy D7
08/07/89          LExit  1      394.36 End of Day Ex $   1130.00 $    86565.00
08/11/89          Sell   1      395.06 Sell D14
08/11/89          SExit  1      388.76 End of Day Ex $   3075.00 $    89640.00
08/17/89          Buy    1      390.45 Buy D5
08/17/89          LExit  1      389.11 End of Day Ex $   -745.00 $    88895.00
08/22/89          Buy    1      385.60 Buy D9
08/22/89          LExit  1      385.71 End of Day Ex $    -20.00 $    88875.00
08/23/89          Buy    1      387.50 Buy D11
08/23/89          LExit  1      388.96 End of Day Ex $    655.00 $    89530.00
09/20/89          Buy    1      388.65 Buy D5
09/20/89          LExit  1      388.81 End of Day Ex $      5.00 $    89535.00
10/02/89          Buy    1      391.05 Buy D10
10/02/89          LExit  1      391.71 End of Day Ex $    255.00 $    89790.00
10/06/89          Buy    1      398.75 Buy D8
10/06/89          LExit  1      399.16 End of Day Ex $    130.00 $    89920.00
11/27/89          Buy    1      383.15 Buy D10
11/27/89          LExit  1      383.41 End of Day Ex $     55.00 $    89975.00
12/29/89          Buy    1      389.55 Buy D8
12/29/89          LExit  1      390.99 End of Day Ex $    645.00 $    90620.00
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book pats4-14   CCSP99A.ASC-Daily   04/21/82 - 10/31/96
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Date	Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
01/02/90		Buy	1	392.30	Buy D10		
01/02/90		LExit	1	397.14	End of Day Ex $	2345.00 $	92965.00
01/08/90		Buy	1	388.80	Buy D12		
01/08/90		LExit	1	392.19	End of Day Ex $	1620.00 $	94585.00
01/16/90		Buy	1	371.50	Buy D11		
01/16/90		LExit	1	376.74	End of Day Ex $	2545.00 $	97130.00
01/18/90		Buy	1	374.85	Buy D5		
01/18/90		LExit	1	375.49	End of Day Ex $	245.00 $	97375.00
01/24/90		Buy	1	362.30	Buy D11		
01/24/90		LExit	1	367.74	End of Day Ex $	2645.00 $	100020.00
02/02/90		Buy	1	365.90	Buy D6		
02/02/90		LExit	1	367.14	End of Day Ex $	545.00 $	100565.00
02/23/90		Buy	1	360.50	Buy D6		
02/23/90		LExit	1	360.14	End of Day Ex $	-255.00 $	100310.00
03/08/90		Buy	1	374.30	Buy D6		
03/08/90		LExit	1	375.19	End of Day Ex $	370.00 $	100680.00
03/14/90		Buy	1	370.75			
03/14/90		LExit	1	372.04	End of Day Ex $	570.00 $	101250.00
04/17/90		Buy	1	376.65	Buy D6		
04/17/90		LExit	1	377.94	End of Day Ex $	570.00 $	101820.00
05/04/90		Buy	1	368.85	Buy D8		
05/04/90		LExit	1	370.64	End of Day Ex $	820.00 $	102640.00
05/11/90		Buy	1	380.85	Buy D7		
05/11/90		LExit	1	384.99	End of Day Ex $	1995.00 $	104635.00
05/21/90		Buy	1	386.15	Buy D12		
05/21/90		LExit	1	389.74	End of Day Ex $	1720.00 $	106355.00
07/02/90		Buy	1	389.75	Buy D10		
07/02/90		LExit	1	389.94	End of Day Ex $	20.00 $	106375.00
07/06/90		Buy	1	388.55	Buy D4		
07/06/90		LExit	1	387.79	End of Day Ex $	-455.00 $	105920.00
07/25/90		Buy	1	385.65	Buy D11		
07/25/90		LExit	1	385.19	End of Day Ex $	-305.00 $	105615.00
08/31/90		Buy	1	346.30	Buy D9		
08/31/90		LExit	1	348.09	End of Day Ex $	820.00 $	106435.00
09/07/90		Buy	1	349.95	Buy D4		
09/07/90		LExit	1	349.19	End of Day Ex $	-455.00 $	105980.00
09/17/90		Buy	1	339.80	Buy D12		
09/17/90		LExit	1	343.39	End of Day Ex $	1720.00 $	107700.00
09/25/90		Buy	1	332.90			
09/25/90		LExit	1	333.94	End of Day Ex $	445.00 $	108145.00
10/22/90		Buy	1	335.90	Buy D8		
10/22/90		LExit	1	338.14	End of Day Ex $	1045.00 $	109190.00
10/30/90		Buy	1	328.40			
10/30/90		LExit	1	328.84	End of Day Ex $	145.00 $	109335.00
11/30/90		Buy	1	341.90	Buy D4		
11/30/90		LExit	1	346.69	End of Day Ex $	2320.00 $	111655.00
12/12/90		Buy	1	350.65	Buy D12		
12/12/90		LExit	1	354.19	End of Day Ex $	1695.00 $	113350.00
12/17/90		Buy	1	348.35	Buy D12		
12/17/90		LExit	1	349.39	End of Day Ex $	445.00 $	113795.00
12/18/90		Buy	1	350.65	Buy D11		
12/18/90		LExit	1	353.34	End of Day Ex $	1270.00 $	115065.00
12/24/90		Buy	1	355.55	Buy D10		
12/24/90		LExit	1	353.14	End of Day Ex $	-1280.00 $	113785.00
01/02/91		Buy	1	353.75	Buy D6		
01/02/91		LExit	1	348.79	End of Day Ex $	-2555.00 $	111230.00
01/10/91		Buy	1	337.35			
01/10/91		LExit	1	337.94	End of Day Ex $	220.00 $	111450.00
01/23/91		Buy	1	352.45	Buy D12		
01/23/91		LExit	1	353.34	End of Day Ex $	370.00 $	111820.00
02/04/91		Buy	1	370.25	Buy D7		
02/04/91		LExit	1	370.89	End of Day Ex $	245.00 $	112065.00
02/08/91		Buy	1	382.00	Buy D6		
02/08/91		LExit	1	382.64	End of Day Ex $	245.00 $	112310.00

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book pats4-14  CCSP99A.ASC-Daily   04/21/82 - 10/31/96
Date     Time    Type   Cnts     Price  Signal Name    Entry P/L  Cumulative
02/27/91         Buy    1       386.45  Buy D12
02/27/91         LExit  1       391.04  End of Day Ex $  2220.00 $ 114530.00
03/01/91         Buy    1       387.15  Buy D6
03/01/91         LExit  1       393.19  End of Day Ex $  2945.00 $ 117475.00
03/05/91         Buy    1       395.00  Buy D6
03/05/91         LExit  1       399.29  End of Day Ex $  2070.00 $ 119545.00
03/13/91         Buy    1       394.65
03/13/91         LExit  1       397.74  End of Day Ex $  1470.00 $ 121015.00
03/22/91         Buy    1       392.10  Buy D6
03/22/91         LExit  1       392.50  End of Day Ex $   125.00 $ 121140.00
04/02/91         Buy    1       396.75  Buy D9
04/02/91         LExit  1       403.35  End of Day Ex $  3225.00 $ 124365.00
04/22/91         Buy    1       407.05  Buy D12
04/22/91         LExit  1       404.60  End of Day Ex $ -1300.00 $ 123065.00
05/08/91         Buy    1       399.65
05/08/91         LExit  1       401.35  End of Day Ex $   775.00 $ 123840.00
05/15/91         Buy    1       394.20  Buy D12
05/15/91         LExit  1       390.95  End of Day Ex $ -1700.00 $ 122140.00
05/21/91         Buy    1       396.15  Buy D5
05/21/91         LExit  1       398.30  End of Day Ex $  1000.00 $ 123140.00
06/11/91         Buy    1       401.50  Buy D11
06/11/91         LExit  1       403.40  End of Day Ex $   875.00 $ 124015.00
06/20/91         Buy    1       397.10  Buy D11
06/20/91         LExit  1       397.05  End of Day Ex $  -100.00 $ 123915.00
06/26/91         Buy    1       393.80  Buy D11
06/26/91         LExit  1       393.80  End of Day Ex $   -75.00 $ 123840.00
07/08/91         Buy    1       397.20  Buy D7
07/08/91         LExit  1       398.70  End of Day Ex $   675.00 $ 124515.00
07/12/91         Sell   1       399.95  Sell D14
07/12/91         SExit  1       401.05  End of Day Ex $  -625.00 $ 123890.00
07/29/91         Buy    1       400.55  Buy D8
07/29/91         LExit  1       402.90  End of Day Ex $  1100.00 $ 124990.00
08/02/91         Buy    1       408.30  Buy D7
08/02/91         LExit  1       406.90  End of Day Ex $  -775.00 $ 124215.00
08/06/91         Buy    1       407.10  Buy D4
08/06/91         LExit  1       410.15  End of Day Ex $  1450.00 $ 125665.00
08/21/91         Buy    1       405.75  Buy D11
08/21/91         LExit  1       410.70  End of Day Ex $  2400.00 $ 128065.00
08/23/91         Buy    1       410.50  Buy D5
08/23/91         LExit  1       413.10  End of Day Ex $  1225.00 $ 129290.00
09/12/91         Buy    1       405.45  Buy D11
09/12/91         LExit  1       406.15  End of Day Ex $   275.00 $ 129565.00
09/13/91         Sell   1       407.25  Sell D14
09/13/91         SExit  1       401.95  End of Day Ex $  2575.00 $ 132140.00
09/16/91         Buy    1       403.35  Buy D5
09/16/91         LExit  1       404.70  End of Day Ex $   600.00 $ 132740.00
10/08/91         Buy    1       399.20  Buy D11
10/08/91         LExit  1       397.70  End of Day Ex $  -825.00 $ 131915.00
10/14/91         Buy    1       399.05  Buy D8
10/14/91         LExit  1       404.20  End of Day Ex $  2500.00 $ 134415.00
11/11/91         Buy    1       410.50  Buy D6
11/11/91         LExit  1       409.90  End of Day Ex $  -375.00 $ 134040.00
11/25/91         Buy    1       392.15  Buy D12
11/25/91         LExit  1       392.20  End of Day Ex $   -50.00 $ 133990.00
12/02/91         Buy    1       387.65  Buy D12
12/02/91         LExit  1       397.85  End of Day Ex $  5025.00 $ 139015.00
12/16/91         Buy    1       401.70  Buy D10
12/16/91         LExit  1       400.65  End of Day Ex $  -600.00 $ 138415.00
12/30/91         Buy    1       423.10  Buy D10
12/30/91         LExit  1       430.35  End of Day Ex $  3550.00 $ 141965.00
01/08/92         Buy    1       431.65  Buy D12
01/08/92         LExit  1       433.15  End of Day Ex $   675.00 $ 142640.00
01/22/92         Buy    1       428.20  Buy D12
01/22/92         LExit  1       433.20  End of Day Ex $  2425.00 $ 145065.00
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book pats4-14  CCSP99A.ASC-Daily   04/21/82 - 10/31/96
Date      Time    Type   Cnts     Price  Signal Name        Entry P/L   Cumulative
02/12/92          Buy    1       431.65  Buy D7
02/12/92          LExit  1       432.20  End of Day Ex $      200.00 $ 145265.00
02/20/92          Buy    1       424.65  Buy D11
02/20/92          LExit  1       427.80  End of Day Ex $     1500.00 $ 146765.00
03/31/92          Buy    1       416.65  Buy D11
03/31/92          LExit  1       416.95  End of Day Ex $       75.00 $ 146840.00
04/09/92          Buy    1       411.00  Buy D11
04/09/92          LExit  1       415.95  End of Day Ex $     2400.00 $ 149240.00
04/22/92          Buy    1       424.45  Buy D11
04/22/92          LExit  1       422.85  End of Day Ex $     -875.00 $ 148365.00
05/18/92          Buy    1       424.85  Buy D12
05/18/92          LExit  1       426.20  End of Day Ex $      600.00 $ 148965.00
06/01/92          Buy    1       428.70  Buy D6
06/01/92          LExit  1       429.55  End of Day Ex $      350.00 $ 149315.00
06/11/92          Buy    1       422.05  Buy D11
06/11/92          LExit  1       422.15  End of Day Ex $      -25.00 $ 149290.00
06/12/92          Sell   1       425.75  Sell D14
06/12/92          SExit  1       422.55  End of Day Ex $     1525.00 $ 150815.00
06/15/92          Buy    1       422.30  Buy D5
06/15/92          LExit  1       423.60  End of Day Ex $      575.00 $ 151390.00
06/26/92          Buy    1       415.55  Buy D6
06/26/92          LExit  1       416.20  End of Day Ex $      250.00 $ 151640.00
07/27/92          Buy    1       423.10  Buy D12
07/27/92          LExit  1       423.10  End of Day Ex $      -75.00 $ 151565.00
07/28/92          Buy    1       426.45  Buy D7
07/28/92          LExit  1       429.50  End of Day Ex $     1450.00 $ 153015.00
07/31/92          Buy    1       436.00  Buy D8
07/31/92          LExit  1       436.00  End of Day Ex $      -75.00 $ 152940.00
08/21/92          Sell   1       432.30  Sell D14
08/21/92          SExit  1       426.70  End of Day Ex $     2725.00 $ 155665.00
08/31/92          Buy    1       426.90  Buy D8
08/31/92          LExit  1       426.25  End of Day Ex $     -400.00 $ 155265.00
09/09/92          Buy    1       428.35
09/09/92          LExit  1       428.75  End of Day Ex $      125.00 $ 155390.00
09/14/92          Buy    1       436.40  Buy D10
09/14/92          LExit  1       437.20  End of Day Ex $      325.00 $ 155715.00
09/18/92          Buy    1       432.60  Buy D8
09/18/92          LExit  1       435.70  End of Day Ex $     1475.00 $ 157190.00
10/12/92          Buy    1       416.55  Buy D12
10/12/92          LExit  1       418.90  End of Day Ex $     1100.00 $ 158290.00
11/02/92          Buy    1       432.70  Buy D4
11/02/92          LExit  1       434.05  End of Day Ex $      600.00 $ 158890.00
11/18/92          Buy    1       432.25
11/18/92          LExit  1       435.05  End of Day Ex $     1325.00 $ 160215.00
11/20/92          Buy    1       436.10  Buy D8
11/20/92          LExit  1       438.60  End of Day Ex $     1175.00 $ 161390.00
12/17/92          Buy    1       444.65
12/17/92          LExit  1       448.15  End of Day Ex $     1675.00 $ 163065.00
01/21/93          Buy    1       445.90  Buy D9
01/21/93          LExit  1       447.85  End of Day Ex $      900.00 $ 163965.00
01/29/93          Sell   1       451.25  Sell D14
01/29/93          SExit  1       449.80  End of Day Ex $      650.00 $ 164615.00
02/03/93          Buy    1       457.80  Buy D7
02/03/93          LExit  1       459.45  End of Day Ex $      750.00 $ 165365.00
02/10/93          Buy    1       457.75  Buy D12
02/10/93          LExit  1       458.65  End of Day Ex $      375.00 $ 165740.00
02/26/93          Buy    1       454.45  Buy D8
02/26/93          LExit  1       455.25  End of Day Ex $      325.00 $ 166065.00
03/02/93          Buy    1       454.25  Buy D6
03/02/93          LExit  1       459.85  End of Day Ex $     2725.00 $ 168790.00
03/08/93          Buy    1       460.15  Buy D9
03/08/93          LExit  1       467.55  End of Day Ex $     3625.00 $ 172415.00
03/22/93          Buy    1       459.10  Buy D6
03/22/93          LExit  1       460.00  End of Day Ex $      375.00 $ 172790.00
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book pats4-14  CCSP99A.ASC-Daily   04/21/82 - 10/31/96
Date      Time    Type  Cnts   Price  Signal Name      Entry P/L  Cumulative
03/29/93          Buy    1    463.85 Buy D4
03/29/93          LExit  1    462.60 End of Day Ex $   -700.00 $ 172090.00
04/12/93          Buy    1    458.65 Buy D5
04/12/93          LExit  1    459.35 End of Day Ex $    275.00 $ 172365.00
04/27/93          Buy    1    447.15
04/27/93          LExit  1    448.70 End of Day Ex $    700.00 $ 173065.00
05/03/93          Buy    1    452.00 Buy D6
05/03/93          LExit  1    453.35 End of Day Ex $    600.00 $ 173665.00
05/10/93          Buy    1    453.70 Buy D12
05/10/93          LExit  1    454.25 End of Day Ex $    200.00 $ 173865.00
05/19/93          Buy    1    452.20 Buy D5
05/19/93          LExit  1    459.30 End of Day Ex $   3475.00 $ 177340.00
05/24/93          Buy    1    456.80 Buy D12
05/24/93          LExit  1    459.10 End of Day Ex $   1075.00 $ 178415.00
06/11/93          Sell   1    459.50 Sell D14
06/11/93          SExit  1    459.35 End of Day Ex $      0.00 $ 178415.00
06/24/93          Buy    1    455.90
06/24/93          LExit  1    458.55 End of Day Ex $   1250.00 $ 179665.00
06/28/93          Buy    1    460.55 Buy D8
06/28/93          LExit  1    462.90 End of Day Ex $   1100.00 $ 180765.00
06/30/93          Buy    1    461.75 Buy D12
06/30/93          LExit  1    461.25 End of Day Ex $   -325.00 $ 180440.00
07/08/93          Buy    1    455.25 Buy D11
07/08/93          LExit  1    458.70 End of Day Ex $   1650.00 $ 182090.00
08/30/93          Buy    1    471.15 Buy D12
08/30/93          LExit  1    472.25 End of Day Ex $    475.00 $ 182565.00
09/15/93          Buy    1    468.35 Buy D12
09/15/93          LExit  1    471.70 End of Day Ex $   1600.00 $ 184165.00
09/27/93          Buy    1    470.55 Buy D8
09/27/93          LExit  1    472.20 End of Day Ex $    750.00 $ 184915.00
10/01/93          Buy    1    471.15 Buy D4
10/01/93          LExit  1    471.70 End of Day Ex $    200.00 $ 185115.00
10/14/93          Buy    1    473.50 Buy D7
10/14/93          LExit  1    477.25 End of Day Ex $   1800.00 $ 186915.00
11/01/93          Buy    1    477.30 Buy D10
11/01/93          LExit  1    478.75 End of Day Ex $    650.00 $ 187565.00
11/10/93          Buy    1    471.40 Buy D5
11/10/93          LExit  1    473.80 End of Day Ex $   1125.00 $ 188690.00
11/30/93          Buy    1    471.90 Buy D9
11/30/93          LExit  1    471.15 End of Day Ex $   -450.00 $ 188240.00
12/08/93          Buy    1    475.90 Buy D12
12/08/93          LExit  1    475.20 End of Day Ex $   -425.00 $ 187815.00
12/22/93          Buy    1    474.85 Buy D12
12/22/93          LExit  1    476.35 End of Day Ex $    675.00 $ 188490.00
01/04/94          Buy    1    474.75 Buy D11
01/04/94          LExit  1    475.15 End of Day Ex $    125.00 $ 188615.00
01/07/94          Buy    1    476.90 Buy D6
01/07/94          LExit  1    478.90 End of Day Ex $    925.00 $ 189540.00
01/12/94          Buy    1    483.05 Buy D12
01/12/94          LExit  1    481.85 End of Day Ex $   -675.00 $ 188865.00
01/26/94          Buy    1    480.60 Buy D4
01/26/94          LExit  1    481.55 End of Day Ex $    400.00 $ 189265.00
01/31/94          Buy    1    487.85 Buy D8
01/31/94          LExit  1    489.35 End of Day Ex $    675.00 $ 189940.00
02/02/94          Buy    1    488.60 Buy D12
02/02/94          LExit  1    489.95 End of Day Ex $    600.00 $ 190540.00
04/05/94          Buy    1    453.15 Buy D11
04/05/94          LExit  1    455.40 End of Day Ex $   1050.00 $ 191590.00
04/07/94          Buy    1    457.05 Buy D5
04/07/94          LExit  1    457.25 End of Day Ex $     25.00 $ 191615.00
04/11/94          Buy    1    454.65 Buy D12
04/11/94          LExit  1    457.20 End of Day Ex $   1200.00 $ 192815.00
04/25/94          Buy    1    455.95 Buy D10
04/25/94          LExit  1    458.90 End of Day Ex $   1400.00 $ 194215.00
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book pats4-14  CCSP99A.ASC-Daily   04/21/82 - 10/31/96
Date      Time   Type  Cnts    Price  Signal Name       Entry P/L  Cumulative
05/17/94         Buy    1     456.90 Buy D7
05/17/94         LExit 1      457.40 End of Day Ex $     175.00 $ 194390.00
05/23/94         Buy    1     460.75 Buy D12
05/23/94         LExit 1      460.65 End of Day Ex $    -125.00 $ 194265.00
06/09/94         Buy    1     464.50
06/09/94         LExit 1      464.85 End of Day Ex $     100.00 $ 194365.00
07/18/94         Buy    1     460.65 Buy D8
07/18/94         LExit 1      460.95 End of Day Ex $      75.00 $ 194440.00
07/27/94         Buy    1     458.55 Buy D12
07/27/94         LExit 1      458.60 End of Day Ex $     -50.00 $ 194390.00
08/08/94         Buy    1     463.05 Buy D12
08/08/94         LExit 1      463.40 End of Day Ex $     100.00 $ 194490.00
08/10/94         Buy    1     464.45 Buy D7
08/10/94         LExit 1      466.55 End of Day Ex $     975.00 $ 195465.00
08/26/94         Buy    1     480.40 Buy D7
08/26/94         LExit 1      480.75 End of Day Ex $     100.00 $ 195565.00
09/19/94         Buy    1     476.85 Buy D12
09/19/94         LExit 1      476.10 End of Day Ex $    -450.00 $ 195115.00
10/07/94         Buy    1     459.85 Buy D6
10/07/94         LExit 1      460.20 End of Day Ex $     100.00 $ 195215.00
10/24/94         Buy    1     469.05 Buy D12
10/24/94         LExit 1      465.70 End of Day Ex $   -1750.00 $ 193465.00
11/02/94         Buy    1     471.85 Buy D12
11/02/94         LExit 1      470.40 End of Day Ex $    -800.00 $ 192665.00
11/03/94         Buy    1     471.90
11/03/94         LExit 1      472.35 End of Day Ex $     150.00 $ 192815.00
11/04/94         Sell   1     473.55 Sell D14
11/04/94         SExit 1      465.95 End of Day Ex $    3725.00 $ 196540.00
11/08/94         Buy    1     469.65 Buy D11
11/08/94         LExit 1      470.50 End of Day Ex $     350.00 $ 196890.00
11/14/94         Buy    1     467.65 Buy D12
11/14/94         LExit 1      470.65 End of Day Ex $    1425.00 $ 198315.00
12/16/94         Buy    1     460.20 Buy D8
12/16/94         LExit 1      462.10 End of Day Ex $     875.00 $ 199190.00
12/21/94         Buy    1     464.95 Buy D7
12/21/94         LExit 1      465.20 End of Day Ex $      50.00 $ 199240.00
01/04/95         Buy    1     463.70 Buy D11
01/04/95         LExit 1      464.05 End of Day Ex $     100.00 $ 199340.00
01/23/95         Buy    1     464.50 Buy D12
01/23/95         LExit 1      468.40 End of Day Ex $    1875.00 $ 201215.00
01/27/95         Buy    1     473.50 Buy D8
01/27/95         LExit 1      471.85 End of Day Ex $    -900.00 $ 200315.00
02/21/95         Buy    1     484.90 Buy D12
02/21/95         LExit 1      484.70 End of Day Ex $    -175.00 $ 200140.00
02/28/95         Buy    1     487.10
02/28/95         LExit 1      488.85 End of Day Ex $     800.00 $ 200940.00
03/06/95         Buy    1     483.50 Buy D12
03/06/95         LExit 1      486.50 End of Day Ex $    1425.00 $ 202365.00
03/20/95         Buy    1     496.30 Buy D8
03/20/95         LExit 1      496.45 End of Day Ex $       0.00 $ 202365.00
03/24/95         Buy    1     499.10 Buy D7
03/24/95         LExit 1      501.70 End of Day Ex $    1225.00 $ 203590.00
06/19/95         Buy    1     537.40 Buy D8
06/19/95         LExit 1      541.35 End of Day Ex $    1900.00 $ 205490.00
06/22/95         Buy    1     544.80 Buy D7
06/22/95         LExit 1      547.05 End of Day Ex $    1050.00 $ 206540.00
06/26/95         Buy    1     545.30 Buy D12
06/26/95         LExit 1      539.90 End of Day Ex $   -2775.00 $ 203765.00
07/10/95         Buy    1     552.30 Buy D8
07/10/95         LExit 1      552.90 End of Day Ex $     225.00 $ 203990.00
07/12/95         Buy    1     550.50 Buy D12
07/12/95         LExit 1      555.80 End of Day Ex $    2575.00 $ 206565.00
07/17/95         Buy    1     555.20 Buy D12
07/17/95         LExit 1      557.15 End of Day Ex $     900.00 $ 207465.00
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book pats4-14   CCSP99A.ASC-Daily   04/21/82 - 10/31/96
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Date	Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
07/28/95		Buy	1	559.70	Buy D8		
07/28/95		LExit	1	556.00	End of Day Ex $	-1925.00	$ 205540.00
08/03/95		Buy	1	551.40	Buy D6		
08/03/95		LExit	1	552.15	End of Day Ex $	300.00	$ 205840.00
08/04/95		Sell	1	552.60	Sell D14		
08/04/95		SExit	1	552.30	End of Day Ex $	75.00	$ 205915.00
08/07/95		Buy	1	552.80	Buy D8		
08/07/95		LExit	1	552.95	End of Day Ex $	0.00	$ 205915.00
08/16/95		Buy	1	551.45	Buy D12		
08/16/95		LExit	1	552.30	End of Day Ex $	350.00	$ 206265.00
10/23/95		Buy	1	573.95	Buy D12		
10/23/95		LExit	1	574.75	End of Day Ex $	325.00	$ 206590.00
11/01/95		Buy	1	571.55	Buy D5		
11/01/95		LExit	1	575.20	End of Day Ex $	1750.00	$ 208340.00
11/08/95		Buy	1	577.45			
11/08/95		LExit	1	581.05	End of Day Ex $	1725.00	$ 210065.00
11/13/95		Buy	1	583.10	Buy D7		
11/13/95		LExit	1	580.85	End of Day Ex $	-1200.00	$ 208865.00
11/15/95		Buy	1	581.05	Buy D4		
11/15/95		LExit	1	583.25	End of Day Ex $	1025.00	$ 209890.00
11/20/95		Buy	1	588.45	Buy D8		
11/20/95		LExit	1	585.35	End of Day Ex $	-1625.00	$ 208265.00
11/28/95		Buy	1	594.50	Buy D7		
11/28/95		LExit	1	594.85	End of Day Ex $	100.00	$ 208365.00
01/12/96		Sell	1	587.55	Sell D14		
01/12/96		SExit	1	585.70	End of Day Ex $	850.00	$ 209215.00
02/21/96		Buy	1	628.60			
02/21/96		LExit	1	632.45	End of Day Ex $	1850.00	$ 211065.00
03/13/96		Buy	1	618.65	Buy D12		
03/13/96		LExit	1	618.40	End of Day Ex $	-200.00	$ 210865.00
03/26/96		Buy	1	632.35	Buy D6		
03/26/96		LExit	1	633.45	End of Day Ex $	475.00	$ 211340.00
04/01/96		Buy	1	630.90	Buy D6		
04/01/96		LExit	1	632.05	End of Day Ex $	500.00	$ 211840.00
04/15/96		Buy	1	617.65	Buy D8		
04/15/96		LExit	1	620.45	End of Day Ex $	1325.00	$ 213165.00
04/25/96		Buy	1	629.15	Buy D6		
04/25/96		LExit	1	629.70	End of Day Ex $	200.00	$ 213365.00
05/13/96		Buy	1	632.00	Buy D10		
05/13/96		LExit	1	638.40	End of Day Ex $	3125.00	$ 216490.00
05/24/96		Buy	1	656.10	Buy D6		
05/24/96		LExit	1	655.25	End of Day Ex $	-500.00	$ 215990.00
06/07/96		Buy	1	638.80	Buy D6		
06/07/96		LExit	1	648.45	End of Day Ex $	4750.00	$ 220740.00
06/11/96		Buy	1	652.50	Buy D6		
06/11/96		LExit	1	646.10	End of Day Ex $	-3275.00	$ 217465.00
07/01/96		Buy	1	646.35	Buy D8		
07/01/96		LExit	1	649.65	End of Day Ex $	1575.00	$ 219040.00
07/03/96		Buy	1	646.45	Buy D12		
07/03/96		LExit	1	644.95	End of Day Ex $	-825.00	$ 218215.00
07/22/96		Buy	1	607.35	Buy D12		
07/22/96		LExit	1	606.40	End of Day Ex $	-550.00	$ 217665.00
07/26/96		Buy	1	605.55	Buy D8		
07/26/96		LExit	1	608.20	End of Day Ex $	1250.00	$ 218915.00
08/12/96		Buy	1	633.65	Buy D9		
08/12/96		LExit	1	636.60	End of Day Ex $	1400.00	$ 220315.00
10/04/96		Buy	1	665.80	Buy D7		
10/04/96		LExit	1	670.05	End of Day Ex $	2050.00	$ 222365.00
10/18/96		Buy	1	674.85	Buy D8		
10/18/96		LExit	1	678.70	End of Day Ex $	1850.00	$ 224215.00
10/23/96		Buy	1	670.55	Buy D12		
10/23/96		LExit	1	673.90	End of Day Ex $	1600.00	$ 225815.00
10/29/96		Buy	1	666.10			
10/29/96		LExit	1	669.10	End of Day Ex $	1425.00	$ 227240.00

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book pats4-14   CCSP99A.ASC-Daily   04/21/82 - 10/31/96
Date      Time      Type  Cnts   Price  Signal Name      Entry P/L  Cumulative
10/31/96            Buy   1      669.35 Buy D6
10/31/96            LExit 1      672.50 End of Day Ex $   1500.00 $ 228740.00
```

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book pats1-2  CCSP99A.ASC-Daily   04/21/82 - 10/31/96
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                    Performance Summary: All Trades

```
Total net profit        $   49575.00   Open position P/L      $      0.00
Gross profit            $   53975.00   Gross loss             $  -4400.00

Total # of trades              69      Percent profitable            75%
Number winning trades          52      Number losing trades           17

Largest winning trade   $   10800.00   Largest losing trade   $  -1125.00
Average winning trade   $    1037.98   Average losing trade   $   -258.82
Ratio avg win/avg loss        4.01     Avg trade(win & loss)  $    718.48

Max consec  winners             9      Max consec. losers              3
Avg # bars in winners           1      Avg # bars in losers            1

Max intraday drawdown   $   -1125.00
Profit factor                 12.27    Max # contracts held            1
Account size required   $    1125.00   Return on account            4407%
```

                    Performance Summary: Long Trades

```
Total net profit        $   24825.00   Open position P/L      $      0.00
Gross profit            $   28125.00   Gross loss             $  -3300.00

Total # of trades              49      Percent profitable            73%
Number winning trades          36      Number losing trades           13

Largest winning trade   $   10800.00   Largest losing trade   $  -1125.00
Average winning trade   $     781.25   Average losing trade   $   -253.85
Ratio avg win/avg loss        3.08     Avg trade(win & loss)  $    506.63

Max consec. winners             9      Max consec. losers              2
Avg # bars in winners           1      Avg # bars in losers            1

Max intraday drawdown   $   -1125.00
Profit factor                  8.52    Max # contracts held            1
Account size required   $    1125.00   Return on account            2207%
```

                    Performance Summary: Short Trades

```
Total net profit        $   24750.00   Open position P/L      $      0.00
Gross profit            $   25850.00   Gross loss             $  -1100.00

Total # of trades              20      Percent profitable            80%
Number winning trades          16      Number losing trades            4

Largest winning trade   $    9050.00   Largest losing trade   $   -600.00
Average winning trade   $    1615.63   Average losing trade   $   -275.00
Ratio avg win/avg loss        5.88     Avg trade(win & loss)  $   1237.50

Max consec. winners             9      Max consec. losers              1
Avg # bars in winners           1      Avg # bars in losers            1

Max intraday drawdown   $    -600.00
Profit factor                 23.50    Max # contracts held            1
Account size required   $     600.00   Return on account            4125%
```

```
book pats1-2  CCSP99A.ASC-Daily   04/21/82 - 10/31/96
Date      Time    Type  Cnts     Price  Signal Name     Entry P/L  Cumulative
11/08/82          Buy   1       254.47  Buy D2
11/09/82          LExit 1       254.67  Exit D2       $     25.00 $      25.00
06/27/83          Buy   1       279.60  Buy D2
06/28/83          LExit 1       280.30  Exit D2       $    275.00 $     300.00
08/08/83          Buy   1       270.60  Buy D2
08/09/83          LExit 1       271.20  Exit D2       $    225.00 $     525.00
11/28/83          Buy   1       274.78  Buy D2
11/29/83          LExit 1       274.88  Exit D2       $    -25.00 $     500.00
01/23/84          Buy   1       272.00  Buy D2
01/24/84          LExit 1       272.30  Exit D2       $     75.00 $     575.00
05/14/84          Buy   1       260.06  Buy D2
05/15/84          LExit 1       260.06  Exit D2       $    -75.00 $     500.00
06/11/84          Buy   1       254.16  Buy D2
06/12/84          LExit 1       254.66  Exit D2       $    175.00 $     675.00
10/01/84          Buy   1       262.66  Buy D2
10/02/84          LExit 1       262.96  Exit D2       $     75.00 $     750.00
07/08/85          Buy   1       276.11  Buy D2
07/09/85          LExit 1       275.81  Exit D2       $   -225.00 $     525.00
07/22/85          Buy   1       278.06  Buy D2
07/23/85          LExit 1       278.31  Exit D2       $     50.00 $     575.00
07/29/85          Buy   1       272.36  Buy D2
07/30/85          LExit 1       272.46  Exit D2       $    -25.00 $     550.00
06/09/86          Buy   1       313.05  Buy D2
06/10/86          LExit 1       312.55  Exit D2       $   -325.00 $     225.00
07/28/86          Buy   1       308.60  Buy D2
07/29/86          LExit 1       309.55  Exit D2       $    400.00 $     625.00
08/25/86          Buy   1       323.35  Buy D2
08/26/86          LExit 1       323.35  Exit D2       $    -75.00 $     550.00
09/29/86          Buy   1       305.01  Buy D2
09/30/86          LExit 1       305.86  Exit D2       $    350.00 $     900.00
03/09/87          Buy   1       364.84  Buy D2
03/10/87          LExit 1       365.14  Exit D2       $     75.00 $     975.00
05/15/87          Sell  1       358.19  Sell D1
05/18/87          SExit 1       357.74  Exit D1       $    150.00 $    1125.00
08/28/87          Sell  1       395.94  Sell D1
08/31/87          SExit 1       395.04  Exit D1       $    375.00 $    1500.00
10/16/87          Sell  1       347.79  Sell D1
10/19/87          SExit 1       329.54  Exit D1       $   9050.00 $   10550.00
10/26/87          Buy   1       285.79  Buy D2
10/27/87          LExit 1       307.54  Exit D2       $  10800.00 $   21350.00
11/09/87          Buy   1       311.14  Buy D2
11/10/87          LExit 1       309.04  Exit D2       $  -1125.00 $   20225.00
11/27/87          Sell  1       302.54  Sell D1
11/30/87          SExit 1       299.54  Exit D1       $   1425.00 $   21650.00
03/25/88          Sell  1       320.49  Sell D1
03/28/88          SExit 1       320.14  Exit D1       $    100.00 $   21750.00
06/20/88          Buy   1       332.34  Buy D2
06/21/88          LExit 1       334.14  Exit D2       $    825.00 $   22575.00
07/22/88          Sell  1       324.39  Sell D1
07/25/88          SExit 1       324.24  Exit D1       $      0.00 $   22575.00
08/22/88          Buy   1       317.44  Buy D2
08/23/88          LExit 1       318.84  Exit D2       $    625.00 $   23200.00
09/26/88          Buy   1       330.44  Buy D2
09/27/88          LExit 1       330.59  Exit D2       $      0.00 $   23200.00
11/04/88          Sell  1       334.74  Sell D1
11/07/88          SExit 1       334.19  Exit D1       $    200.00 $   23400.00
11/07/88          Buy   1       333.19  Buy D2
11/08/88          LExit 1       334.59  Exit D2       $    625.00 $   24025.00
03/17/89          Sell  1       345.85  Sell D1
03/20/89          SExit 1       345.50  Exit D1       $    100.00 $   24125.00
06/12/89          Buy   1       377.20  Buy D2
06/13/89          LExit 1       376.00  Exit D2       $   -675.00 $   23450.00
09/25/89          Buy   1       385.66  Buy D2
09/26/89          LExit 1       386.01  Exit D2       $    100.00 $   23550.00
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book pats1-2  CCSP99A.ASC-Daily   04/21/82 - 10/31/96
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Date	Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
10/13/89		Sell	1	365.56	Sell D1		
10/16/89		SExit	1	360.56	Exit D1	$ 2425.00	$ 25975.00
11/06/89		Buy	1	370.11	Buy D2		
11/07/89		LExit	1	370.21	Exit D2	$ -25.00	$ 25950.00
01/12/90		Sell	1	375.59	Sell D1		
01/15/90		SExit	1	375.84	Exit D1	$ -200.00	$ 25750.00
04/20/90		Sell	1	367.14	Sell D1		
04/23/90		SExit	1	366.04	Exit D1	$ 475.00	$ 26225.00
04/23/90		Buy	1	363.39	Buy D2		
04/24/90		LExit	1	364.44	Exit D2	$ 450.00	$ 26675.00
06/18/90		Buy	1	387.44	Buy D2		
06/19/90		LExit	1	387.34	Exit D2	$ -125.00	$ 26550.00
08/03/90		Sell	1	372.19	Sell D1		
08/06/90		SExit	1	360.19	Exit D1	$ 5925.00	$ 32475.00
08/06/90		Buy	1	359.94	Buy D2		
08/07/90		LExit	1	365.54	Exit D2	$ 2725.00	$ 35200.00
09/24/90		Buy	1	329.94	Buy D2		
09/25/90		LExit	1	332.14	Exit D2	$ 1025.00	$ 36225.00
12/17/90		Buy	1	349.39	Buy D2		
12/18/90		LExit	1	349.64	Exit D2	$ 50.00	$ 36275.00
01/04/91		Sell	1	345.19	Sell D1		
01/07/91		SExit	1	341.94	Exit D1	$ 1550.00	$ 37825.00
01/07/91		Buy	1	339.49	Buy D2		
01/08/91		LExit	1	339.94	Exit D2	$ 150.00	$ 37975.00
04/22/91		Buy	1	404.60	Buy D2		
04/23/91		LExit	1	406.20	Exit D2	$ 725.00	$ 38700.00
05/06/91		Buy	1	402.15	Buy D2		
05/07/91		LExit	1	402.30	Exit D2	$ 0.00	$ 38700.00
06/24/91		Buy	1	391.95	Buy D2		
06/25/91		LExit	1	393.65	Exit D2	$ 775.00	$ 39475.00
10/04/91		Sell	1	398.05	Sell D1		
10/07/91		SExit	1	398.15	Exit D1	$ -125.00	$ 39350.00
10/21/91		Buy	1	407.95	Buy D2		
10/22/91		LExit	1	407.05	Exit D2	$ -525.00	$ 38825.00
04/20/92		Buy	1	423.75	Buy D2		
04/21/92		LExit	1	423.85	Exit D2	$ -25.00	$ 38800.00
07/20/92		Buy	1	426.05	Buy D2		
07/21/92		LExit	1	426.90	Exit D2	$ 350.00	$ 39150.00
10/02/92		Sell	1	421.90	Sell D1		
10/05/92		SExit	1	420.10	Exit D1	$ 825.00	$ 39975.00
11/16/92		Buy	1	432.75	Buy D2		
11/17/92		LExit	1	433.20	Exit D2	$ 150.00	$ 40125.00
12/28/92		Buy	1	450.75	Buy D2		
12/29/92		LExit	1	451.35	Exit D2	$ 225.00	$ 40350.00
04/02/93		Sell	1	453.55	Sell D1		
04/05/93		SExit	1	454.60	Exit D1	$ -600.00	$ 39750.00
08/23/93		Buy	1	465.70	Buy D2		
08/24/93		LExit	1	465.75	Exit D2	$ -50.00	$ 39700.00
11/22/93		Buy	1	468.80	Buy D2		
11/23/93		LExit	1	470.30	Exit D2	$ 675.00	$ 40375.00
04/04/94		Buy	1	446.00	Buy D2		
04/05/94		LExit	1	450.00	Exit D2	$ 1925.00	$ 42300.00
05/06/94		Sell	1	453.35	Sell D1		
05/09/94		SExit	1	451.85	Exit D1	$ 675.00	$ 42975.00
05/09/94		Buy	1	448.75	Buy D2		
05/10/94		LExit	1	451.45	Exit D2	$ 1275.00	$ 44250.00
05/23/94		Buy	1	460.65	Buy D2		
05/24/94		LExit	1	460.85	Exit D2	$ 25.00	$ 44275.00
06/24/94		Sell	1	447.55	Sell D1		
06/27/94		SExit	1	447.75	Exit D1	$ -175.00	$ 44100.00
08/22/94		Buy	1	468.25	Buy D2		
08/23/94		LExit	1	469.05	Exit D2	$ 325.00	$ 44425.00
06/26/95		Buy	1	539.90	Buy D2		
06/27/95		LExit	1	540.20	Exit D2	$ 75.00	$ 44500.00

```
book pats1-2  CCSP99A.ASC-Daily   04/21/82 - 10/31/96
Date      Time    Type   Cnts    Price  Signal Name     Entry P/L   Cumulative
02/26/96          Buy    1      629.60 Buy D2
02/27/96          LExit  1      631.50 Exit D2        $    875.00 $  45375.00
03/08/96          Sell   1      612.80 Sell D1
03/11/96          SExit  1      607.75 Exit D1        $   2450.00 $  47825.00
07/05/96          Sell   1      629.95 Sell D1
07/08/96          SExit  1      629.55 Exit D1        $    125.00 $  47950.00
07/22/96          Buy    1      606.40 Buy D2
07/23/96          LExit  1      608.15 Exit D2        $    800.00 $  48750.00
08/26/96          Buy    1      633.05 Buy D2
08/27/96          LExit  1      634.85 Exit D2        $    825.00 $  49575.00
```

Chapter 6

Short-Term Reversal Systems

Reversal systems are among the most effective systems that you can find for trading the stock index futures contracts. One of the most pronounced tendencies of the stock market is for the indices such as the S&P 500 to travel from a relative low to a relative high and from a relative high to a relative low. By this we mean that the market will often swing from the lowest close in x number of days to the highest closing price in x number of days. This concept, and a way to exploit it, will be made clearer through this chapter.

The focus of my reversal system is a short-term move that reverses a recent extreme in price. You await the onset of a reversal from a relative high or low before trading in the direction of this counter-swing. The historical results of our system are high enough to warrant the use of such vehicles as OEX put and call options. We do not recommend futures positions leveraged far .beyond your cash. Rather, the safety net provided by slightly out of the money hedging options against futures positions can be crucial to your survival when the unexpected strikes.

In the S&P 500 futures market, many traders employ stochastics, RSI and other trading oscillators. Normally these traders will buy at the close when the oscillators move from oversold to overbought and sell when the reverse occurs. I refer you to my chapter on the *"Market Wizard"* method for more detail on this type of strategy. The prevalence of oscillator trading strategies can provide an edge in using intraday reversal systems. Indeed, I will show you how oscillator traders will actually push our reversal system trades in the direction we want.

Rules of our S&P reversal system:

The Buy Rules:

1) If the S&P 500 contract closes below the lowest price of the preceding six days, then we search for a trade.

2) If a close below the lowest low of the preceding six days occurs, then just before the open the following day, we place a buy stop at the highest close of the preceding three days.

3) If the market does not hit our stop, then we cancel the stop at the close of the day.

4) If the market does not hit our stop, but it closes again below the lowest price of the previous six days, then we place a new stop just before the opening the following day at the current highest close of the three preceding days.

The Sell Rules:

1) If the S&P 500 contract closes above the highest price of the preceding six days then we search for a trade.

2) If a close above the highest high of the six preceding days occurs, then at the open the following day we place a sell stop at the lowest close of the three preceding days.

3) If the market does not hit our stop, then we cancel our stop at the end of the day.

4) If the market does not hit our stop, but it closes again above the highest price of the previous six days, then we move our stop at the open the following day to the current lowest close of the three preceding days.

5) If our stop is hit, we stay short the market for five days including the day of entry and exit on the close of the fifth day.

Results and Discussion of the Reversal System:

As you can see from the system results page, our reversal system has had a marvelous record in jumping into profitable reversal trades. These reversals have signaled large moves in the majority of cases. It would seem that the psychology underlying the stock index futures contracts changes for a few days after an x day extreme reversal. The build up in optimism that creates a six day high rapidly dissipates when the market reverses from the extreme. Similarly, the pessimism existing when a six-day low is made vanishes when the market moves back up through our channel of recent closes.

Another advantage of the system is the fact that our stop will not be in a cluster where the pit will normally be looking for them. We are not buying at a high or low itself. Instead, we are able to take a position intraday on days when many oscillator systems will signal at the close. Look for your yourself at the position of short term trading oscillators when the market makes a six day extreme price. These indicators will normally show an oversold or overbought market. By positioning ourselves in the direction of the reversal intraday, we get a bit of a jump on other traders.

With an average trade of over $1,500 on the S&P, 76% accuracy and $56,976 in profits and a W/L ratio of 1.52, you should spend the time required to monitor the reversal system signals.

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Chap6 Reversals   CCSP99A-Daily    04/21/82 - 03/31/97
```

Performance Summary: All Trades

Total net profit	$ 56976.50	Open position P/L	$ 0.00
Gross profit	$ 72212.50	Gross loss	$ -15236.00
Total # of trades	37	Percent profitable	76%
Number winning trades	28	Number losing trades	9
Largest winning trade	$ 8500.00	Largest losing trade	$ -3300.00
Average winning trade	$ 2579.02	Average losing trade	$ -1692.89
Ratio avg win/avg loss	1.52	Avg trade(win & loss)	$ 1539.91
Max consec. winners	7	Max consec. losers	2
Avg # bars in winners	4	Avg # bars in losers	4
Max intraday drawdown	$ -6600.00		
Profit factor	4.74	Max # contracts held	1
Account size required	$ 6600.00	Return on account	863%

Performance Summary: Long Trades

Total net profit	$ 28704.50	Open position P/L	$ 0.00
Gross profit	$ 34939.50	Gross loss	$ -6235.00
Total # of trades	15	Percent profitable	80%
Number winning trades	12	Number losing trades	3
Largest winning trade	$ 6100.00	Largest losing trade	$ -3300.00
Average winning trade	$ 2911.63	Average losing trade	$ -2078.33
Ratio avg win/avg loss	1.40	Avg trade(win & loss)	$ 1913.63
Max consec. winners	4	Max consec. losers	1
Avg # bars in winners	4	Avg # bars in losers	4
Max intraday drawdown	$ -3575.00		
Profit factor	5.60	Max # contracts held	1
Account size required	$ 3575.00	Return on account	803%

Performance Summary: Short Trades

Total net profit	$ 28272.00	Open position P/L	$ 0.00
Gross profit	$ 37273.00	Gross loss	$ -9001.00
Total # of trades	22	Percent profitable	73%
Number winning trades	16	Number losing trades	6
Largest winning trade	$ 8500.00	Largest losing trade	$ -3300.00
Average winning trade	$ 2329.56	Average losing trade	$ -1500.17
Ratio avg win/avg loss	1.55	Avg trade(win & loss)	$ 1285.09
Max consec. winners	5	Max consec. losers	2
Avg # bars in winners	4	Avg # bars in losers	4
Max intraday drawdown	$ -6376.00		
Profit factor	4.14	Max # contracts held	1
Account size required	$ 6376.00	Return on account	443%

```
Chap6 Reversals    CCSP99A-Daily    04/21/82 - 03/31/97
Date       Time    Type  Cnts    Price  Signal Name       Entry P/L   Cumulative
09/22/82           Sell  1      234.920
09/28/82           SExit 1      234.620                $    150.00 $      150.00
09/16/83           Buy   1      275.550
09/22/83           LExit 1      279.580                $   2015.00 $     2165.00
11/30/83           Sell  1      274.780
12/06/83           SExit 1      273.930                $    425.00 $     2590.00
01/04/84           Buy   1      272.400
01/10/84           LExit 1      275.000                $   1300.00 $     3890.00
11/07/84           Sell  1      264.260
11/13/84           SExit 1      261.460                $   1400.00 $     5290.00
12/14/84           Buy   1      258.160
12/20/84           LExit 1      260.610                $   1225.00 $     6515.00
03/19/85           Buy   1      267.220
03/25/85           LExit 1      265.450                $   -885.00 $     5630.00
06/07/85           Sell  1      273.799
06/13/85           SExit 1      269.550                $   2124.50 $     7754.50
01/08/86           Sell  1      289.560
01/14/86           SExit 1      285.210                $   2175.00 $     9929.50
04/22/86           Sell  1      317.450
04/28/86           SExit 1      318.850                $   -700.00 $     9229.50
07/28/86           Sell  1      311.700
08/01/86           SExit 1      306.900                $   2400.00 $    11629.50
11/12/86           Sell  1      321.359
11/18/86           SExit 1      312.510                $   4424.50 $    16054.00
01/23/87           Sell  1      345.340
01/29/87           SExit 1      351.590                $  -3125.00 $    12929.00
08/26/87           Sell  1      403.740
09/01/87           SExit 1      391.790                $   5975.00 $    18904.00
09/22/87           Buy   1      383.891
09/28/87           LExit 1      391.940                $   4024.50 $    22928.50
02/09/88           Buy   1      317.490
02/16/88           LExit 1      326.490                $   4500.00 $    27428.50
07/06/88           Sell  1      333.740
07/12/88           SExit 1      330.190                $   1775.00 $    29203.50
07/28/88           Buy   1      326.990
08/03/88           LExit 1      334.890                $   3950.00 $    33153.50
08/16/88           Buy   1      324.040
08/22/88           LExit 1      317.440                $  -3300.00 $    29853.50
09/22/88           Sell  1      330.140
09/28/88           SExit 1      330.040                $     50.00 $    29903.50
01/04/89           Buy   1      336.650
01/10/89           LExit 1      337.750                $    550.00 $    30453.50
03/17/89           Sell  1      349.250
03/23/89           SExit 1      342.950                $   3150.00 $    33603.50
06/22/89           Buy   1      368.960
06/28/89           LExit 1      371.960                $   1500.00 $    35103.50
02/27/91           Buy   1      389.990
03/05/91           LExit 1      399.290                $   4650.00 $    39753.50
05/10/91           Sell  1      398.299
05/16/91           SExit 1      394.150                $   2074.50 $    41828.00
10/10/91           Buy   1      398.050
10/16/91           LExit 1      410.250                $   6100.00 $    47928.00
01/22/92           Buy   1      433.500
01/28/92           LExit 1      429.400                $  -2050.00 $    45878.00
05/01/92           Sell  1      422.100
05/07/92           SExit 1      428.700                $  -3300.00 $    42578.00
12/17/92           Buy   1      445.850
12/23/92           LExit 1      452.500                $   3325.00 $    45903.00
06/24/93           Buy   1      457.650
06/30/93           LExit 1      461.250                $   1800.00 $    47703.00
07/30/93           Sell  1      457.950
08/05/93           SExit 1      458.900                $   -475.00 $    47228.00
11/17/93           Sell  1      472.200
11/23/93           SExit 1      471.050                $    575.00 $    47803.00
```

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Chap6 Reversals    CCSP99A-Daily    04/21/82 - 03/31/97
Date      Time     Type  Cnts    Price  Signal Name      Entry P/L  Cumulative
12/28/94           Sell  1      463.549
01/04/95           SExit 1      464.050              $    -250.50 $  47552.50
04/17/95           Sell  1      504.299
04/21/95           SExit 1      506.600              $   -1150.50 $  46402.00
09/21/95           Sell  1      574.700
09/27/95           SExit 1      572.400              $    1150.00 $  47552.00
01/04/96           Sell  1      598.500
01/10/96           SExit 1      581.500              $    8500.00 $  56052.00
01/23/97           Sell  1      736.049
01/29/97           SExit 1      734.200              $     924.50 $  56976.50
```

```
Type        : System
Name        : Chap6 Reversals
Notes       :

Last Update : 08/26/97 06:44pm
Printed on  : 08/26/97 06:44pm
Verified    : NO
```

```
If close<lowest(low,6)[1]  then buy tomorrow at highest(close,3)[1] stop;
if barssinceentry=4  then  exitlong  on  close;

if close>highest(high,6)[1] then sell tomorrow at lowest(close,3)[1] stop;
if barssinceentry=4 then exitshort on close;
```

Chapter 7

Symmetrical Pattern

Traders trained in macroeconomic theory run the risk entering trades based upon superficial analysis of inter market price action. As many of you know, a sharp upward move in a commodity such as crude oil or gold can scare S&P 500 traders into selling their stock positions or going short. Commodity prices are perceived as having an inverse relationship with stock prices.

The reasoning of many traders taking short positions springs from the following logical chain: 1) commodity prices rising means that inflation is growing and therefore the Federal Reserve is more likely to raise short-term rates. 2) This monetary tightening will be bad for stocks and therefore S&P's should be sold based upon the commodity price rise. This macroeconomic logic, used at the wrong moment, leads to what I call the commodity fakeout trap. This chapter should get you to steer clear of this trap.

The psychology behind the average trader's decision to trade must be studied. It is this psychology that will take the poor trader into the wrong positions over and over. The methods that I teach you are designed to move the average trader's losses into the credit field of your account statement. Remember, in a field as complex as leveraged trading, decisions of the average trader will nearly always prove incorrect. I am about to show you one situation in which intuition may lead you astray.

What I have done is identify intermarket patterns that trick the average trader into making a mistake. By acting in a counterintuitive fashion and by taking the opposite side of the trade, we will move ourselves into the small camp of winners. The crucial insider concept about what are called "symmetrical patterns" will also be discussed.

Commodity Fakeout System #1:

The Monday Inflation Fakeout:

One of the traps that has ensnared many traders is the inflation fakeout trap. News over the weekend and moves in overseas markets create unique volatility patterns on Mondays. In effect, Monday reflects over two days of events because traders cannot enter or exit positions over the weekend. We want to trade a market that reaches an extreme price just prior to a reversal, and Monday's have frequently ended with futures markets at extreme prices. Therefore, the commodity fakeout system will enter trades only on Monday at the close.

Buy Rules:

1) If the S&P 500 contracts close at a lower price than the closes of the preceding six days on Monday then the first condition (extreme price on Monday) has been met.

2) If the New York Silver Futures contracts simultaneously close at a price higher than the closes of the preceding 9 days then the second condition (extreme commodity price on Monday) has been met.

3) If condition 1 and condition 2 have been met, then we will buy the S&P 500 futures contracts at the close. We will exit our long trade on Wednesday's opening.

Sell Rules:

1) If the S&P 500 futures contracts close at a higher price than the closes of the preceding 6 days on Monday then the first condition (extreme price on Monday) has been met.

2) If the New York silver futures contracts simultaneously close a price lower than the

closes of the preceding 9 days then the second condition (extreme commodity price on Monday) has been met.

3) If sell conditions 1 and 2 are both met, then we will sell the S&P 500 futures on close. We will exit our short trade Wednesday's opening.

Results and discussion:

This system provides what professionals call a symmetrical pattern trade. In layman's terms, this means that simply reversing the rules for buying and selling creates a profitable result on both longs and shorts. This type of pattern carries great value to the professional hedge fund trader. The value derives from the fact that symmetry can indicate a cause and effect relationship between a statistical phenomenon and its outcome. In this system, the symmetry seems to indicate that the price changes of silver, our proxy for inflation sensitive commodity prices, create a cause and effect price pattern in the S&P 500.

The symmetrical pattern made over $5.00 for every $1 lost. It maintained an accuracy rate in excess of 75% and made an average of $1618 on each winning trade. Silver is by no means the only commodity that can be used for intermarket systems.

We have noted value in the crude oil, soybean and copper markets in timing the S&P as well. However, the inter-market concept draws on a theory about perceptions of commodity price increases. It is very difficult to find successful short sale patterns during a secular bull market in stock prices. The short sale record should impress the experienced analyst of S&P trading methods.

```
Chapter7 Symmetry  CCSP99A-Daily   04/01/82 - 03/31/97

                     Performance Summary:  All Trades

Total net profit       $  51600.00   Open position P/L     $       0.00
Gross profit           $  63125.00   Gross loss            $  -11525.00

Total # of trades            50      Percent profitable          78%
Number winning trades        39      Number losing trades         11

Largest winning trade  $  20250.00   Largest losing trade  $   -2675.00
Average winning trade  $   1618.59   Average losing trade  $   -1047.73
Ratio avg win/avg loss       1.54    Avg trade(win & loss) $    1032.00

Max consec. winners          13      Max consec. losers            2
Avg # bars in winners         2      Avg # bars in losers          2

Max intraday drawdown  $ -12000.00
Profit factor                5.48    Max # contracts held          1
Account size required  $  12000.00   Return on account          430%
```

```
                     Performance Summary:  Long Trades

Total net profit       $  37950.00   Open position P/L     $       0.00
Gross profit           $  44000.00   Gross loss            $   -6050.00

Total # of trades            22      Percent profitable          77%
Number winning trades        17      Number losing trades          5

Largest winning trade  $  20250.00   Largest losing trade  $   -2675.00
Average winning trade  $   2588.24   Average losing trade  $   -1210.00
Ratio avg win/avg loss       2.14    Avg trade(win & loss) $    1725.00

Max consec. winners           8      Max consec. losers            2
Avg # bars in winners         2      Avg # bars in losers          2

Max intraday drawdown  $ -12675.00
Profit factor                7.27    Max # contracts held          1
Account size required  $  12675.00   Return on account          299%
```

```
                     Performance Summary:  Short Trades

Total net profit       $  13650.00   Open position P/L     $       0.00
Gross profit           $  19125.00   Gross loss            $   -5475.00

Total # of trades            28      Percent profitable          79%
Number winning trades        22      Number losing trades          6

Largest winning trade  $   2225.00   Largest losing trade  $   -2075.00
Average winning trade  $    869.32   Average losing trade  $    -912.50
Ratio avg win/avg loss       0.95    Avg trade(win & loss) $     487.50

Max consec. winners          14      Max consec. losers            2
Avg # bars in winners         2      Avg # bars in losers          2

Max intraday drawdown  $  -3300.00
Profit factor                3.49    Max # contracts held          1
Account size required  $   3300.00   Return on account          414%
```

```
Chapter7 Symmetry  CCSP99A-Daily   04/01/82 - 03/31/97
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Date	Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
07/26/82		Buy	1	223.250			
07/28/82		LExit	1	222.550		$ -350.00	$ -350.00
01/09/84		Sell	1	275.800			
01/11/84		SExit	1	274.850		$ 475.00	$ 125.00
04/23/84		Buy	1	259.660			
04/25/84		LExit	1	261.110		$ 725.00	$ 850.00
04/30/84		Sell	1	263.110			
05/02/84		SExit	1	264.110		$ -500.00	$ 350.00
12/17/84		Sell	1	258.310			
12/19/84		SExit	1	262.460		$ -2075.00	$ -1725.00
03/18/85		Buy	1	264.200			
03/20/85		LExit	1	267.750		$ 1775.00	$ 50.00
04/08/85		Buy	1	263.850			
04/10/85		LExit	1	264.950		$ 550.00	$ 600.00
05/20/85		Sell	1	274.250			
05/22/85		SExit	1	273.550		$ 350.00	$ 950.00
07/01/85		Sell	1	277.110			
07/03/85		SExit	1	277.110		$ 0.00	$ 950.00
12/09/85		Sell	1	285.710			
12/11/85		SExit	1	286.310		$ -300.00	$ 650.00
02/03/86		Sell	1	293.560			
02/05/86		SExit	1	291.510		$ 1025.00	$ 1675.00
04/21/86		Sell	1	320.400			
04/23/86		SExit	1	315.950		$ 2225.00	$ 3900.00
06/09/86		Buy	1	313.050			
06/11/86		LExit	1	313.150		$ 50.00	$ 3950.00
06/16/86		Sell	1	320.850			
06/18/86		SExit	1	318.400		$ 1225.00	$ 5175.00
03/30/87		Buy	1	361.290			
04/01/87		LExit	1	359.740		$ -775.00	$ 4400.00
04/13/87		Buy	1	355.390			
04/15/87		LExit	1	353.840		$ -775.00	$ 3625.00
06/22/87		Sell	1	381.190			
06/24/87		SExit	1	378.340		$ 1425.00	$ 5050.00
10/19/87		Buy	1	267.040			
10/21/87		LExit	1	307.540		$ 20250.00	$ 25300.00
01/04/88		Sell	1	321.790			
01/06/88		SExit	1	324.690		$ -1450.00	$ 23850.00
01/25/88		Sell	1	317.040			
01/27/88		SExit	1	315.390		$ 825.00	$ 24675.00
04/04/88		Buy	1	319.690			
04/06/88		LExit	1	322.940		$ 1625.00	$ 26300.00
05/23/88		Buy	1	313.340			
05/25/88		LExit	1	317.740		$ 2200.00	$ 28500.00
08/29/88		Sell	1	323.840			
08/31/88		SExit	1	324.640		$ -400.00	$ 28100.00
01/30/89		Sell	1	351.250			
02/01/89		SExit	1	352.750		$ -750.00	$ 27350.00
05/15/89		Sell	1	368.900			
05/17/89		SExit	1	368.200		$ 350.00	$ 27700.00
05/22/89		Sell	1	374.000			
05/24/89		SExit	1	370.300		$ 1850.00	$ 29550.00
08/07/89		Sell	1	394.360			
08/09/89		SExit	1	393.360		$ 500.00	$ 30050.00
08/28/89		Sell	1	395.760			
08/30/89		SExit	1	393.360		$ 1200.00	$ 31250.00
10/09/89		Sell	1	400.560			
10/11/89		SExit	1	399.610		$ 475.00	$ 31725.00
12/04/89		Sell	1	388.860			
12/06/89		SExit	1	387.310		$ 775.00	$ 32500.00
08/06/90		Buy	1	359.940			
08/08/90		LExit	1	362.040		$ 1050.00	$ 33550.00
09/24/90		Buy	1	329.940			
09/26/90		LExit	1	333.790		$ 1925.00	$ 35475.00

Chapter7 Symmetry CCSP99A-Daily   04/01/82 - 03/31/97

Date	Time	Type	Cnts	Price	Signal Name	Entry P/L	Cumulative
10/01/90		Sell	1	340.890			
10/03/90		SExit	1	340.540		$ 175.00	$ 35650.00
01/07/91		Buy	1	339.490			
01/09/91		LExit	1	340.940		$ 725.00	$ 36375.00
02/11/91		Sell	1	391.840			
02/13/91		SExit	1	388.440		$ 1700.00	$ 38075.00
06/10/91		Buy	1	399.950			
06/12/91		LExit	1	401.800		$ 925.00	$ 39000.00
08/19/91		Buy	1	397.300			
08/21/91		LExit	1	403.950		$ 3325.00	$ 42325.00
09/09/91		Buy	1	407.100			
09/11/91		LExit	1	404.150		$ -1475.00	$ 40850.00
08/03/92		Sell	1	436.900			
08/05/92		SExit	1	435.050		$ 925.00	$ 41775.00
03/08/93		Sell	1	467.550			
03/10/93		SExit	1	466.550		$ 500.00	$ 42275.00
04/26/93		Buy	1	443.900			
04/28/93		LExit	1	447.900		$ 2000.00	$ 44275.00
11/01/93		Sell	1	478.750			
11/03/93		SExit	1	477.900		$ 425.00	$ 44700.00
01/03/94		Buy	1	473.600			
01/05/94		LExit	1	474.650		$ 525.00	$ 45225.00
03/07/94		Sell	1	474.750			
03/09/94		SExit	1	473.250		$ 750.00	$ 45975.00
05/06/96		Buy	1	617.550			
05/08/96		LExit	1	612.200		$ -2675.00	$ 43300.00
05/20/96		Sell	1	650.900			
05/22/96		SExit	1	649.550		$ 675.00	$ 43975.00
07/15/96		Buy	1	599.100			
07/17/96		LExit	1	605.950		$ 3425.00	$ 47400.00
08/26/96		Buy	1	633.050			
08/28/96		LExit	1	636.350		$ 1650.00	$ 49050.00
09/09/96		Sell	1	633.900			
09/11/96		SExit	1	631.350		$ 1275.00	$ 50325.00
01/27/97		Buy	1	724.850			
01/29/97		LExit	1	727.400		$ 1275.00	$ 51600.00

```
Type        : System
Name        : Chapter7 Symmetry
Notes       :

Last Update : 08/26/97 06:51pm
Printed on  : 08/26/97 06:52pm
Verified    : YES



If close<lowest(close,6)[1] and
close of data2>highest(close,9)[1] of data2
and dayofweek(date)=l then buy on close;

if barssinceentry=l then exitlong at market;

if close>highest(close,6)[1] and
close of data2<lowest(close,9)[1] of data2
and dayofweek(date)=1 then sell on close;

if barssinceentry=l then exitshort at market;
```

Chapter 8

Range Expansion Search Code

In creating a list of patterns for trading programs, there are two ways to proceed. The first method is to observe the markets and investigate hunches as to market behavior. Occasionally, using this method, useful trading patterns will be detected. This is the method I used until I came across the written opinions on the subject of star trader, Monroe Trout on this subject. Trout learned to trade while working for my former employer, Victor Niederhoffer in New York. Trout logically proposes the idea that a more efficient method of pattern research is to simply test all possible parameters and intermarket relationships to see if any of the results look statistically valid.

What I will present to you in this chapter is a sample program that you can use to test all possible patterns of a technique called range expansion. If you are unfamiliar with the concept of range expansion, let me explain. Range expansion refers to any system that takes the value of one chart point, subtracts the value of another chart point and then adds or subtracts this value from an opening or close to derive a buy or sell point.

In many cases, we will be using a percentage of the value we calculate and then add or subtract this value to tomorrow's opening for our buy and sell points. Since it is easy to run a comprehensive search of all volatility expansion patterns and then to consider the possibilities, we will demonstrate the technique.

Our Tradestation program to find volatility expansion sell signals reads as follow:

```
Inputs:  cha(O), opt(O), per(O), tday(O);
Vars:voll(0), vol2(0);
voll=highest(high,cha) - lowest(close,opt);
vol2=highest(close,cha)-lowest(low,opt);
if day of week (date)=tday and
voll<vol2  then sell tomorrow at open tomorrow -(voll*per) stop;
if dayofweek(date)=tday  and
vol2<voll then sell tomorrow at open tomorrow - (vol2*per) stop;
```

Our program to search for volatility expansion buy signals looks as follows:

```
Inputs:  cha(O), opt(O), per(0), tday(O);
Vars:voll(0),vol2(0);
Voll=highest(high,cha)-lowest(close,opt);
Vol2=highest(close,cha)-lowest(low,opt);
If dayofweek(date)=tday and
Voll<vol2 then buy tomorrow at open tomorrow+(voll*per) stop;
If dayofweek(date)=tday and
Vol2<voll then buy tomorrow at open tomorrow + (vol2*per) stop;
```

This program will test every day of the week for volatility expansion trades. It alters the values that are searched as well. Since the highs, closes and lows are inputs, we can test all values from 1 -5 days ago and all days from 1 -5 (Monday to Friday) and all percentage expansions from 109& to 200%. We will use the lesser of the two values that we calculate. In addition, we will test all parameters of each of the three components to get a sense as to whether there is a range of values that shows some promise.

If we only find a single working value, we must suspect an over-optimized system and avoid it. Our general rule is to base our trading only upon pattern systems that have profit factors above 3 and percentage accuracy in the area of 70% or better and many similar profitability reading at different parameters.

Results and discussion:

On the sell side, the range expansion search program only identified the opening on Monday as a profitable time for placing orders using the system. Thursday's opening and Friday's opening showed up as tradable by this method, but only at very selective parameter values, so I would not use them. By selling a volatility expansion to the downside on Mondays, given our parameters, we are playing the odds and betting on a continuation of the phenomenon.

On the buy side, Monday, Tuesday and Wednesday openings were identified as tradable range expansion times. By buying volatility expansions to the upside given our parameters, we have come out winners in the past.

Volatility systems have use in identifying tradable market patterns. However, we would not make them the basis or our entire trading strategy. These types of trades prove most useful when you are already in a trade and want additional information on the likely outcome. The triggering of any of these systems gives you a strong clue as to likely directional bias for that day.

Results table:

The spreadsheet shown provides the parameters that met our profitability conditions. You can create similar sheets to establish volatility daytrading parameters for other markets or to rerun our study using the Tradestation code. This "brute force" search method showcases one excellent use for Tradestation.

CHA	OPT	PER	TDAY	NetPrft	L:NetPrft	PFact	ROA	MaxDD	#Trds	%Prft	BigWTrd	BigLTrd	AvgWTrd
4	5	0.7	2	29967	29967	2.97	422.78	-7088	93	68	3215	-2503	716.55
1	4	1.9	5	51114	51114	2.78	533.91	-9573.5	120	62	10250	-4543	1078.4
4	2	1.3	5	27925.5	27925.5	2.76	510.1	-5474.5	82	60	2975	-2087.5	894.06
5	2	1.3	5	26451	26451	2.75	417.93	-6329	76	59	2975	-2087.5	924.43
3	2	1.3	5	30247.5	30247.5	2.71	569.47	-5311.5	96	61	2975	-2087.5	812.67
4	1	1.9	5	54163.5	54163.5	2.69	1302.01	-4160	157	62	4497	-2455.5	879.56
2	5	1	5	26132.5	26132.5	2.66	683.11	-3825.5	82	57	4625	-3575.5	890.14
4	1	1.6	5	61105.5	61105.5	2.54	1578.75	-3870.5	179	60	4640	-2395.5	941.21
2	2	1.6	5	31067	31067	2.44	618.49	-5023	105	60	3830	-4220.5	836.02
1	5	1.9	5	38706	38706	2.44	404.3	-9573.5	101	56	10250	-4543	1150.57
3	1	1.9	5	56092.5	56092.5	2.42	1109.64	-5055	182	63	4497	-3167.5	837.89
5	1	1.9	5	46682	46682	2.42	1122.16	-4160	148	61	4497	-2455.5	875.24
2	2	1.3	5	43392	43392	2.4	838.9	-5172.5	138	60	4227.5	-4422.5	896.17
3	5	0.7	5	27832	27832	2.39	658.59	-4226	118	58	3755	-3338	694.12
5	1	1.6	5	54147.5	54147.5	2.38	1398.98	-3870.5	166	60	4640	-2395.5	943.49
4	4	0.7	2	31590	31590	2.35	454.27	-6954	115	65	3215	-2352.5	733.29
2	3	1.3	5	28873	28873	2.33	556.86	-5185	87	64	4227.5	-4422.5	903.65
3	4	0.7	5	38565	38565	2.33	703.04	-5485.5	139	60	3755	-4030.5	813.97
4	1	1.3	5	67444	67444	2.33	1309.21	-5151.5	215	57	4782.5	-3305	960.61

This table shows the top 20 range expansion buy patterns found by the program in Chapter 8 of the text. Refer to the chapter and the system code for details on this spreadsheet result table.

CHA	OPT	PER	TDAY	NetPrft	S:NetPrft	PFact	ROA	MaxDD	#Trds	%Prft	BigWTrd	BigLTrd	AvgWTrd
2	4	1.6	5	27478.5	27478.5	3.25	470.93	-5835	53	60	14250	-5065	1240.77
2	4	1.3	5	36125.5	36125.5	2.75	509.71	-7087.5	69	71	17437.5	-7087.5	1158.58
2	3	1.6	5	26925	26925	2.68	422.49	-6373	54	54	14250	-5065	1162.12
3	4	1	5	28730.5	28730.5	2.52	400.4	-7175.5	68	60	17250	-4475	1162.05
2	5	1.3	5	28794	28794	2.47	406.26	-7087.5	55	65	17437.5	-7087.5	1344.49
4	5	0.7	5	35360	35360	2.37	756.77	-4672.5	82	59	19087.5	-3200	1276.3
2	3	1.3	5	35144	35144	2.29	495.86	-7087.5	87	66	17437.5	-7087.5	1094.68
5	3	0.7	5	28233	28233	2.21	604.24	-4672.5	75	59	19087.5	-3200	1170.36
5	2	1.3	3	31148.5	31148.5	2.06	330.56	-9423	113	55	19087.5	-4022.5	977.48
3	5	0.7	5	28159	28159	2.04	490.96	-5735.5	93	54	7242.5	-2937.5	1105.38
5	5	1	5	35527.5	35527.5	2.03	555.03	-6401	86	62	12685	-6075.5	1322.31
2	2	0.7	5	32272.5	32272.5	1.96	513.44	-6285.5	101	51	19087.5	-5065	1268.36
4	4	1.6	5	28056	28056	1.93	409.19	-6856.5	101	52	20625	-3140	1098.34
2	2	1	5	38176	38176	1.91	584.98	-6526	103	59	20625	-6075.5	1317.33
3	4	1	5	25776	25776	1.85	334.71	-7701	94	56	17250	-4475	1058.33
3	3	0.7	5	32527.5	32527.5	1.84	566.14	-5745.5	100	55	21450	-3810.5	1298.9
5	5	0.7	4	29509.5	29509.5	1.79	378.86	-7789	117	50	12685	-2245	1131.36
4	4	0.7	4	26609	26609	1.74	247	-10773	109	53	12685	-5772.5	1081.66
4	4	0.7	3	27218.5	27218.5	1.74	242.41	-11228.5	122	52	7512.5	-2627.5	1015.56

This table shows the top 20 range expansion sell patterns found by the program in Chapter 8 of the text. Refer to the chapter and the system code for details on this spreadsheet result table.

```
Type        : System
Name        : Chapter8 RangeExpand
Notes       :

Last Update : 08/28/97 08:39pm
Printed on  : 08/28/97 08:39pm
Verified    : YES
```

{Our program to search for volatility expansion sell signals looks as follows:}

```
(Inputs:  cha(0), opt(0), per(0), tday(0);
Vars: vol1(0), vol2(0);
vol1=highest(high,cha) - lowest(close,opt);
vol2=highest(close,cha) -lowest(low,opt);
if dayofweek(date)=tday and
vol1<vol2 then sell tomorrow at open tomorrow -(vol1*per) stop;
if dayofweek(date)=tday and
vol2<vol1 then sell tomorrow at open tomorrow - (vol2*per) stop;}
```

{Our program to search for volatility expansion buy signals looks as follows:}

```
Inputs:  cha(0), opt(0), per(0), tday(0);
Vars: vol1(0), vol2(0);
Vol1=highest(high,cha)-lowest(close,opt);
Vol2=highest(close,cha)-lowest(low,opt);
If dayofweek(date)=tday and
Vol1<vol2 then buy tomorrow at open tomorrow+(vol1*per) stop;
If dayofweek(date)=tday and
Vol2<vol1 then buy tomorrow at open tomorrow + (vol2*per) stop;
```

{Note. You must run each half of this program separately. The first paragraph performs a short sale pattern search. The last paragraph performs a buy signal pattern search. Use bracket "{ }" to enclose the inactive part of the search before you try to run the program.}

Chapter 9

Why the Large Hedge Funds Win In Equities and How You Can Too

Why large hedge funds stumped many hedge fund performance analysts. The issues raised by this question go to the very nature of trading. At all levels, trading is successful over time, only to the extent that the trader has an advantage over competing interests. Having been in the hedge fund industry for several years, I have used the time to observe why large traders are able to pull money out of the markets year after year with such seeming ease. I have categorized the advantages of the largest traders into several categories. Perhaps you will reconsider trading completely when you read what type of competitors you face in the markets.

Informational advantages

In return for giving millions of dollars of commissions to the large sell side brokerage houses, hedge funds are given better information than public traders. Hedge funds do not need to use material, nonpublic information to achieve profits. Instead, hedge funds have advantages that are not available to public or small traders. For instance, if the drug analyst at a top brokerage house on Wall Street has decided to change his/her recommendation on Merck, who do you think gets the first call? Since the brokerage firms have such a tremendous following any change in analyst opinions or estimates will generate follow-through trading. Whether or not

the analyst is accurate is irrelevant. In the hours or days following the analyst's announcement, the short-term trading profits have already been made by the large funds.

The second type of profits available to large traders comes in the form of IPO shares. Again, in return for frequent business, the underwriting syndicates at the major Wall Street houses give the hottest IPO shares to the best customers more or less. Simply by having significant assets under management and high turnover, a customer is given shares at prices below the opening prices of IPO shares on the issue date. All the large trader has to do is sell the IPO shares at the market at the open ten minutes or so after receiving the shares. This is the closest thing to a free lunch on Wall Street.

What many of the equity and futures traders overlook is that it is not quantitative screens or insightful analysis that makes markets move in your direction. It is the knowledge that people will buy the trading vehicle after you that makes it a worthwhile investment. Perhaps you will not get the "first call" or any IPO shares, but let me give you a method that will show you how to get in front of other traders in the stock market.

Method Preamble: The Analyst Opinion Game

To understand why buying stocks that register surprisingly positive earning is a successful strategy, it is important to understand how Wall Street analysts and salespeople function. Analysts are assigned to a group of stocks categorized by industries. They provide recommendations and publish their opinions in monthly or quarterly publications. If they change their opinion about a stock, they pass on their opinion and hopefully bring in business for their firm's trading departments. If a few weeks after the new recommendation, a client decides to invest in the sector of the market that the analyst covers, that client will oftentimes solicit the analyst recommendations before buying. In addition, once an analyst recommends or downgrades a stock, the brokerage firm's retail arm will start to push the recommendation.

Therefore, changes in analysts' estimates have a longer term effect on flows of capital into certain stocks that they like or dislike. Many companies provide screens that rank the universe of stocks on several factors to generate buy lists and sell lists. For most such screens, the key factor is earnings surprises. **Zweig Securities** and *The Value Line Investment Survey* are two companies that create rankings that incorporate earnings surprise data. These

screens have excellent track records in selecting stocks that outperform market averages. When a stock reports earnings higher than analyst consensus estimates, the Wall Street community rapidly changes its forecasts.

With this knowledge, we can employ a sophisticated method to get into stocks before the analysts and mechanical screens reach all traders that use them. Here is my special method for getting in front of Wall Street.

Our Power Stock Selection Method: The Value Line Outflanking Maneuver:

I subscribe to the *Value Line Investment Survey*. Each week I receive a summary and index report that lists stocks that have been upgraded or downgraded on their scale of 1-5 for timeliness. Stocks that are ranked a 1 have a dramatic history of outperforming the averages and to some degree the outperformance may be self fulfilling. If you look at the section in the weekly report called "Noteworthy rank changes," you will see the stocks that have changed in rank and the reason for the change. In the overwhelming majority of cases it is the stocks that have reported earnings surprises that get listed.

We are going to try to identify stocks that are about to be upgraded to the ranking of 1 in the *Value Line Investment Survey*. What we do to accomplish this is to monitor all the stocks ranked 2 or 3 in the survey on our quote machine ticker. This news monitoring can be done on many quote machines by ticker symbol. Anytime a stock ranked 2 or 3 in *Value Line Reports* a positive earnings surprise, we will buy it at the market immediately following the announcement.

Since the analysts at the major firms did not get their consensus estimates correct in evaluating the stocks we are buying, it will certainly cause them to either change their estimates upward or to look more carefully at the reporting company. In addition, since many of the quantitative screens used by top money managers employ earnings surprise data, we will get the jump on many portfolio managers using our method. Ideally, the *Value Line Investment Survey* will also give a new ranking to the stock, and we will hit a homerun.