The V1 Trading System

A Systematic Swing Trading System for Volatile Stocks

Including Portfolio Management

www.tradingsystemsthatwork.com

Important

System Name:
V1 Trading System.

Brief Description of System:
The V1 trading system is a systematic swing trading system designed to take long trades in anticipation of short term price reversals in oversold stocks. The system is specifically designed to take advantage of volatile stocks.

Type of System:
Swing trading system.

Trades:
Takes long trades only.

Trading Opportunities:
Stocks.

Data Used:
End-of-day data.

Indicators Used:
1. Daily price data.
2. 5 day simple moving average.
3. 20 day ADX.
4. 10 day average true range (ATR).
5. 50 day average true range (ATR).
6. 20 day moving average of close x volume (simple money flow).
7. 10 day average true range as a percentage of the closing price.

The V1 Trading System

Rules for Long Entries:

1. The closing price must be the lowest closing price for 5 days – Today's close being the lowest close for at least 5 days indicates the stock is becoming oversold.

2. The 20 day ADX must be greater than 20 – For a swing trading system we want to avoid stocks that are have been trending sideways for an extended period of time and so we eliminate stocks with an ADX reading below 20.

3. The 10 day ATR must be greater than the 50 day ATR – This system is designed for trading volatile stocks and so we are only interested in stocks where the short term volatility, measured by the 10 day ATR, is greater than the long term volatility, measured by the 50 day ATR.

4. The simple money flow must be greater than 4,000,000 – The simple money flow is a multiple of the closing price x the daily volume, providing an indicator of how many dollars were traded on a stock that day. We use a 20 day simple moving average of the money flow as we only want to be trading in consistently liquid stocks that we can buy and sell with relative ease and avoid excessive slippage.

If all four rules are met then the stock is a candidate for trading, but these four rules alone are not enough to buy the stock. There are two more important factors to be considered before placing an order.

The Filter:

After applying the four rules above to our universe of stocks we will typically get a large number of stocks that meet these requirements. Of course we cannot systematically trade every stock that meets the four rules, and neither would we want to. We are only interested in volatile stocks and so we apply a filter to our list of stock candidates in order to prioritise them by volatility.

The find the most volatile stocks we again use the 10 day ATR, but this time as a percentage of price.

The calculation would be:

$$(ATR(10)/Close\ ) \times 100$$

Using this filter we can sort our list of stock candidates by recent volatility.

The Limit Order:
Now that we know which stock we want to trade we can place our orders. While the stocks we have selected are oversold, they are not oversold enough. The next thing we want to see is each stock experiencing an intraday sell off.

As we are trading volatile stocks we want this intraday sell off to be large and significant and so we place a limit order to buy the stock if it trades 10% below today's closing price. The limit order is valid for that day only.

Repeat:
If, after taking a position in a stock, the same stock appears on our filtered list of stock candidates on another day as a viable trading opportunity again, then we will place a second limit order for this stock.

We will only ever take a maximum of two entries in a single stock before closing a position. If a stock that has been purchased twice in our portfolio appears on our list of stock candidates then ignore this stock and move on to the next stock on the list.

Closing the Trade:
We will exit the trade when the stock ceases to be oversold. We measure a move from oversold to overbought when the stock price closes greater than or equal to the 5 day simple moving average.

When the close is greater than or equal to the 5 day simple moving average we exit the trade by placing a market order to sell the entire position at the next market open.

The Portfolio:
The portfolio dictates how many orders we will place each day, and how large these orders will be.

The maximum number of individual trades we will take with the V1 system is 20. This does not mean the maximum number of stocks we will hold in our portfolio is 20. As we said before, we will allow the system to purchase the same stock twice, so it is possible that the portfolio could be full after purchasing 10 separate stocks twice.

Next we need to know how much capital to allocate to each trade. For the V1 system we use a fixed amount per trade. We determine this amount by taking the total amount of capital allocated to this portfolio and dividing by the maximum number of trades we will make in the portfolio, 20. So, if we were to allocate $100,000 to this portfolio then each trade we made would be $5,000 (20 x $5,000 = $100,000).

Putting It All Together:

Each evening after the market has closed, or before the market opens the next day, we update our stock market data to prepare to scan for new trades.

The first thing we do after updating our stock market data is check our existing portfolio of stocks we have already purchased to see if any have closed at, or above, their 5 day simple moving average, our rule for exiting a trade.

If a stock has closed above the 5sma then we would place an order to sell all shares of that stock at the open on the next day. We would then remove that stock from the list of stocks held in our V1 portfolio so a new order can be placed to fill the gap in the portfolio.

It is important to be aware of how many times the stock was purchased for the portfolio. If a stock was purchased twice, it will have taken up 2 positions within the portfolio. When it comes time to sell that stock we only place a single sell order for the combined number of shares purchased by both earlier orders, but we must unallocated this stock from both positions it held in our portfolio, not just one.

As we said before we will have 20 positions within our portfolio, so for this example let's say we have allocated 15 of those positions to stocks we have purchased already. After updating our stock market data we find 3 stocks within our portfolio that have closed above their 5sma, and one of these stocks was purchased twice. So we place sell orders for these 3 stocks and free up 4 spaces from our portfolio.

We now have 11 positions filled in our portfolio, and 9 free spaces.

Next we carry out a scan of the stock market to find stocks that meet our 4 initial rules. This scan will usually produce a large number of stocks that meet these requirements, so we take this list of stocks and sort it with our filter (ATR(10)%).

We remove any stocks from this list that we have purchased twice already.

With this new prioritised stock list we take the most volatile stocks from the top of the list. The number of stocks we will place orders for corresponds to the number of vacant positions we have in our portfolio.

In our example we have 9 free spaces in our portfolio and so place limit orders for the 9 most volatile stocks in our list.

As we are using limit orders to purchase stocks there is no guarantee that the orders will be filled, especially limit orders placed so far away from the prior days closing price.

After the market has closed we check to see which of these limit orders were filled and add those stocks to the portfolio.

To complete our example portfolio let’s say 2 of our 9 limit orders were filled and we add these stocks to our portfolio and so our portfolio now has 13 positions allocated within it.

We have now completed a trading day using the V1 trading system, and will continue to repeat the process each trading day.

Results – Original System

Here are the simulated returns using the V1 trading system from January 2000 to December 2007.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	56.66%	32.74%	57.66%	-4.53%	13.05%	11.40%	17.96%	0.59%	14.42%	16.65%	12.09%	12.15%	**684.83%**
2001	45.43%	-10.02%	2.75%	-1.94%	10.76%	7.86%	8.74%	8.02%	-1.53%	22.34%	-2.27%	17.30%	**155.52%**
2002	-3.79%	1.18%	5.92%	-3.93%	-2.30%	18.12%	18.98%	7.86%	6.39%	0.25%	10.30%	4.23%	**79.89%**
2003	4.28%	3.79%	7.69%	14.78%	3.28%	24.00%	15.54%	3.71%	5.03%	12.56%	10.46%	6.36%	**185.17%**
2004	8.01%	7.68%	9.13%	6.93%	-0.39%	-0.17%	5.67%	0.05%	1.90%	6.07%	7.73%	10.62%	**83.81%**
2005	7.75%	3.83%	2.38%	6.27%	1.86%	0.19%	3.93%	-1.42%	3.50%	-3.86%	3.10%	0.33%	**30.99%**
2006	6.43%	8.93%	-0.35%	13.18%	15.22%	6.25%	2.32%	6.62%	2.27%	0.46%	2.21%	1.36%	**85.86%**
2007	5.55%	5.25%	16.60%	1.98%	-0.10%	0.92%	-2.45%	23.91%	3.65%	8.30%	4.21%	-0.32%	**87.72%**

Includes commission of 1 cent per share.

Stops:
The original version of the V1 system does a not use a stop loss. This is because a stop loss will generally reduce the overall effectiveness of a system. However, not everyone is comfortable trading without a stop loss and if that is the case then a stop loss can be included.

I have included performance results for 2 different stop loses: 25% and 50%.

Results – 25% stop loss

Here are the simulated returns using the V1 trading system with a 25% stop loss from January 2000 to December 2007.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	41.18%	21.50%	24.92%	9.76%	10.66%	12.60%	12.80%	3.95%	10.17%	20.13%	1.95%	14.54%	**431.11%**
2001	44.32%	-11.27%	1.68%	3.09%	10.76%	4.18%	9.59%	8.29%	-13.82%	19.95%	-1.72%	19.06%	**122.33%**
2002	-11.42%	0.04%	0.12%	-4.43%	5.12%	14.78%	9.89%	19.55%	-2.45%	0.76%	4.64%	0.61%	**39.07%**
2003	4.28%	3.12%	8.37%	14.78%	3.28%	24.29%	13.06%	4.25%	5.03%	9.39%	9.82%	3.31%	**163.80%**
2004	4.01%	7.47%	6.41%	-0.04%	8.64%	-0.56%	5.03%	-0.32%	1.33%	3.58%	7.73%	9.10%	**65.89%**
2005	4.09%	4.55%	0.87%	4.92%	2.73%	0.19%	3.93%	0.68%	3.16%	3.43%	1.77%	0.08%	**34.81%**
2006	-5.57%	5.99%	-2.07%	13.18%	7.71%	4.08%	2.66%	6.62%	1.84%	1.16%	0.77%	-0.81%	**40.17%**
2007	6.42%	3.15%	10.26%	3.39%	-0.28%	0.92%	-7.66%	4.87%	3.65%	4.96%	4.59%	-4.28%	**32.81%**

Includes commission of 1 cent per share.

Results – 50% stop loss

Here are the simulated returns using the V1 trading system with a 50% stop loss from January 2000 to December 2007.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	54.94%	33.88%	36.53%	-5.79%	13.05%	11.40%	17.96%	0.59%	14.42%	22.43%	12.09%	11.52%	**598.24%**
2001	45.43%	-9.54%	2.75%	1.97%	10.76%	7.86%	8.74%	7.88%	-1.53%	19.74%	-3.62%	17.30%	**157.49%**
2002	-12.22%	1.24%	0.91%	0.17%	5.36%	18.12%	16.86%	11.84%	6.39%	1.27%	10.30%	2.65%	**78.24%**
2003	4.28%	3.79%	7.69%	14.78%	3.28%	24.00%	15.54%	3.71%	5.03%	12.56%	10.46%	6.36%	**185.17%**
2004	4.76%	12.57%	9.13%	6.93%	0.17%	-0.17%	5.67%	0.05%	-0.27%	6.07%	7.73%	10.62%	**83.43%**
2005	7.75%	4.52%	2.38%	6.27%	3.73%	0.19%	3.93%	0.86%	3.50%	-3.92%	0.52%	1.77%	**35.80%**
2006	-5.26%	0.18%	-0.35%	13.18%	9.93%	6.25%	2.32%	6.62%	2.27%	0.46%	2.21%	1.36%	**45.17%**
2007	5.55%	5.25%	22.41%	1.98%	-0.10%	0.92%	-2.45%	19.00%	3.65%	8.30%	5.51%	-2.11%	**88.17%**

Includes commission of 1 cent per share.

The Aggressive V1 Trading System:
The aggressive version of the V1 trading system is almost identical to the original version. The only difference is the portfolio allocation.

Where as the original version of the V1 system divides the portfolio into 20 even sized trades, the aggressive version only divides the portfolio into 10 even sized trades.

The logic behind this aggressive version is that the most volatile stocks tend to be the stocks that hit their limit orders and join the portfolio. So by dividing our portfolio into 10 positions instead of 20 we focus a larger portion of our portfolio on the more volatile stocks.

While the aggressive version of the V1 system has out performed the original version in simulated trading it is not all good news. The downside to using the aggressive version of the system is that the aggressive system is less diversified by only dividing the portfolio into 10 positions, instead of 20, and as such is prone to larger drawdowns than those we might expect with a more diversified portfolio.

Results – Aggressive System

Here are the simulated returns using the aggressive version of the V1 trading system from January 2000 to December 2007.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
2000	79.03%	36.55%	76.10%	5.59%	23.93%	3.10%	18.53%	2.01%	13.20%	32.97%	28.18%	10.19%	**1393.11%**
2001	56.94%	-6.39%	9.28%	10.92%	14.05%	10.82%	12.37%	8.57%	-1.97%	25.79%	-17.43%	19.41%	**233.83%**
2002	-5.61%	2.16%	7.43%	-12.75%	-2.51%	21.95%	30.30%	19.43%	10.26%	15.91%	14.86%	6.23%	**160.78%**
2003	5.83%	6.43%	10.17%	27.99%	5.32%	42.73%	19.17%	5.37%	10.05%	18.59%	13.35%	9.15%	**384.08%**
2004	13.83%	5.28%	8.62%	6.23%	-5.89%	-2.05%	12.44%	-2.33%	2.89%	10.73%	12.97%	20.04%	**116.28%**
2005	11.89%	7.25%	4.95%	8.43%	7.58%	0.38%	6.97%	0.30%	2.54%	-2.18%	5.20%	-2.31%	**63.08%**
2006	13.97%	10.43%	-0.69%	23.89%	20.06%	7.16%	3.36%	14.30%	3.05%	0.80%	3.34%	2.31%	**158.51%**
2007	9.51%	10.51%	29.46%	4.87%	-1.65%	1.84%	-6.42%	11.08%	5.91%	16.62%	-1.37%	-1.77%	**104.70%**

Includes commission of 1 cent per share.

Example 1:

08/15/07 – AA meets the 4 basic rules for trading when it closes at the lowest close for at least 5 days, the ADX(20) is greater than 20, the ATR(10) is greater than the ATR(50), and the simple money flow is greater than $4,000,000.

08/16/07 – AA sells off during the day and drops more than 10% below the previous days close resulting in an order being filled at 30.33.

08/20/07 – AA closes above the 5 day simple moving average and the trade is closed at the open the next day.

08/21/07 – AA is sold at the open for 34.26.

Example 2:

01/03/00 – CMCSA meets all 4 basic requirements to become a trade candidate.

01/04/00 – CMCSA sells off intraday just below the 10% limit order at 28.05.

01/10/00 – CMCSA closes above the 5 day simple moving average and the trade is closed at the next market open.

01/11/00 – CMCSA is sold at the open for 32.33.

Example 3:

11/09/00 – HPQ meets all 4 rules as a viable trading candidate.

11/10/00 – HPQ sells off and the limit order is filled at 38.64.

11/17/00 – HPQ closes above the 5 day simple moving average and an order is placed to close the trade at the next market open.

11/20/00 – HPQ is sold at the open for 35.63.

Example 4:

10/13/00 – XRX meets all 4 rules to be a viable trade.

10/16/00 – XRX sells off and the limit order if filled at 9.39. XRX continues to sell off hard for the rest of the day.

10/17/00 – XRX still meets all 4 rules for trading and as the stock has only been purchased once a second limit order can be placed for the next day.

10/18/00 – XRX sells off again and a second order is filled at 6.80.

10/20/00 – XRX closes above the 5 day simple moving average and an order is placed to close the entire position at the next days open.

10/23/00 – XRX is sold at the open for 8.75.