How to avoid a suite of bad robot trades.

This report was written on August 18, 2011 by Pascal Willain, Author of the book
"Value in Time: Better Trading Through Effective Volume"
John Wiley & Sons, New York, 2008.

The author can be contacted at: pascal@willain.com
Daily and weekly market updates are available on www.effectivevolume.eu

---

Introduction

In late July/early August of 2011, the IWM robot experienced four consecutive losing trades. These losing trades were the primary consequence of the 20DMF's miss of a short signal that should have been issued on July 27. The reason the system failed to issue a short signal is that confirmation was lacking from the inversed ETFs signal until August 2, when the 20DMF itself turned to cash when it entered oversold territory while in a buy mode.

Although the problem originated within the market direction model, I felt it was strange that the IWM

robot failed to detect the danger in following this particular 20DMF signal.
As a result, we had to ignore the IWM robot for two weeks.
The objective of this document is to show how the robot can indeed learn to sniff out poisonous conditions earlier.

As a reminder, the IWM Robot analyzes the LT/ST edges combination (See Figure 1 and 2) in a very simple way:

1. If the LT is higher than 0.75%, the robot goes long
2. If the LT is lower than -0.75%, the robot goes short
3. In between, the robot only looks at the ST edge and follows what looks best.

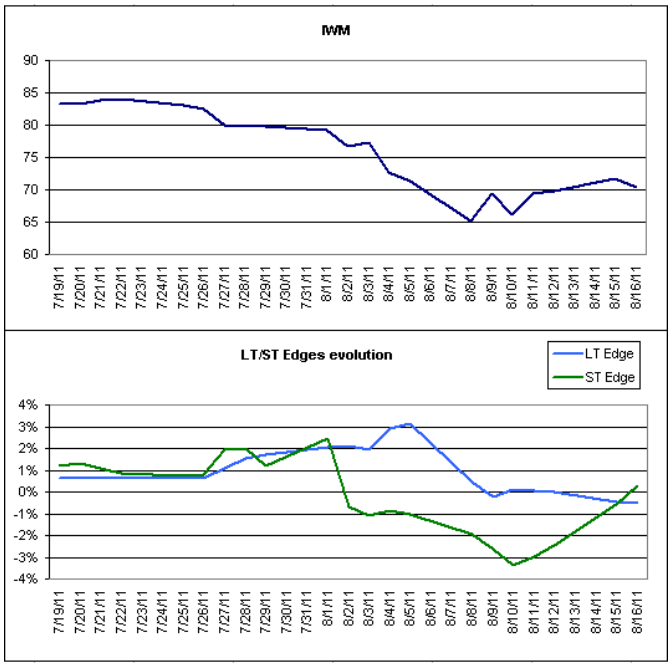


Figure 1: LT/ST signals

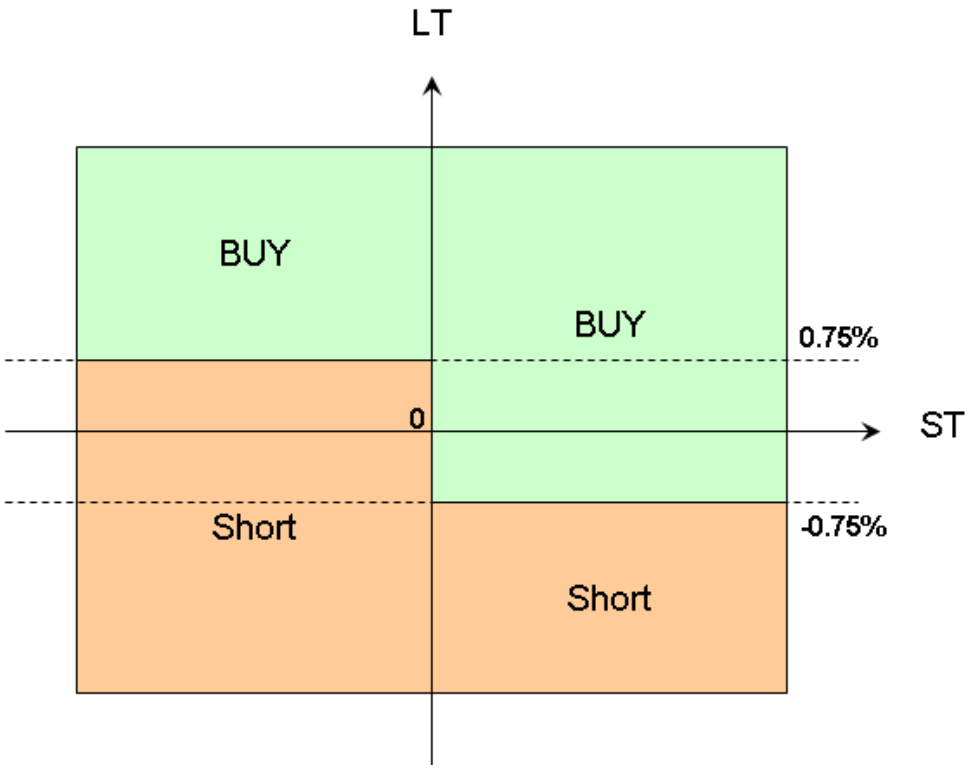


Figure 2: Previous Robot rules

The Solution

We have also been publishing "strength" statistics that characterize each trade (See the table below). These statistics have been calculated by going through the LT/ST signal combination for the past three years to see how the price moves three days after each signal.

For example, a LT > 0.75% and ST > 2% would be rated "Strong buy" with the following comments: *"In the past this combination led to a 3D gain of 3.63% from the previous day's close, with the trade being positive after three days in 64% of the cases."*

The IWM robot, however, has no knowledge of these statistics. The idea was therefore to study the combination of the different signals and see the influence of trades initiated at such signals on both the equity curve and the drawdown. This has been a long process involving numerous tests.

LT	ST	Type of trade
LT> 2%	ST > 1.5%	Strong Buy
1%<LT< 2%	1%<ST<1.5%	Buy
0.75%<LT< 1%	1%<ST<1.5%	Neutral
LT> 0.75%	ST>2%	Strong Buy
LT> 0.75%	1.5%<ST<2%	Buy
LT> 0.75%	ST<1%	Neutral
-0.75%<LT< 0.75%	ST > 1%	Buy
-0.75%<LT< 0.75%	ST < 1%	Neutral
LT<-4%	Any signal	Strong Short
-2%>LT>-4%	ST>-2%	Short
-0.75%>LT>-2%	ST>-2%	Neutral
-0.75%>LT>-4%	ST<-2%	Short

The new rules (See Figure 3) are set as follows to initiate a new trade:
1. Buy when LT > -0.75% while ST > 1%
2. Short when LT < -2% or LT < -0.75% while ST < -2%
3. Stay neutral any other time

Once a new trade is initiated, it is kept even if the settings move into the neutral zone, unless of course a stop loss is triggered.

As you can see, the Neutral zone is much larger than any of the two other zones. In reality, the settings are in neutral mode 65% of the time. They are in Buy mode for 23% and in short mode for 12%.

This means that once we are stopped out of a bad trade, there is a great probability that the initial market conditions have changed and that the robot has fallen back into a neutral zone.
Although the neutral zone includes 65% of all trading days, with these settings the robot is invested 85% of the time, because once a trade is initiated, it is held even if the settings turn to neutral.

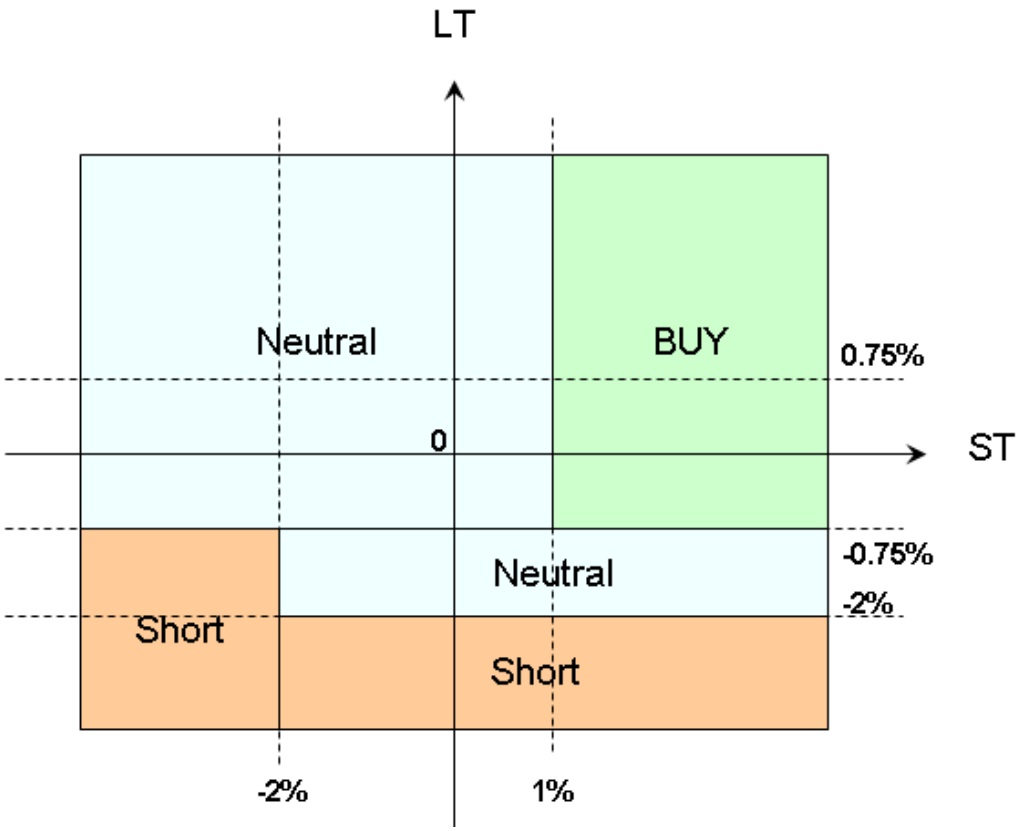
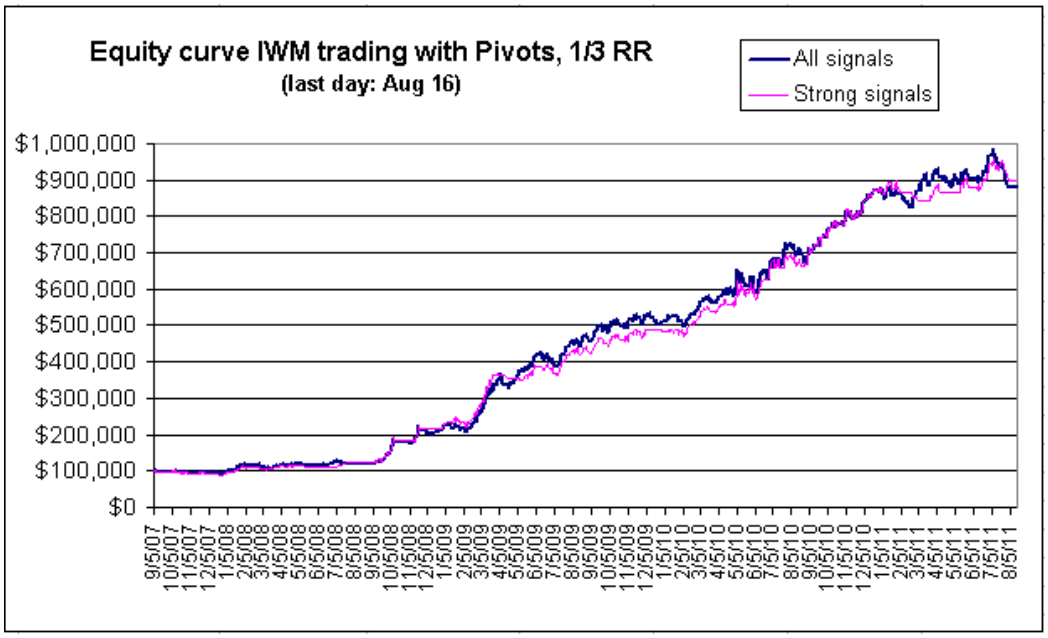
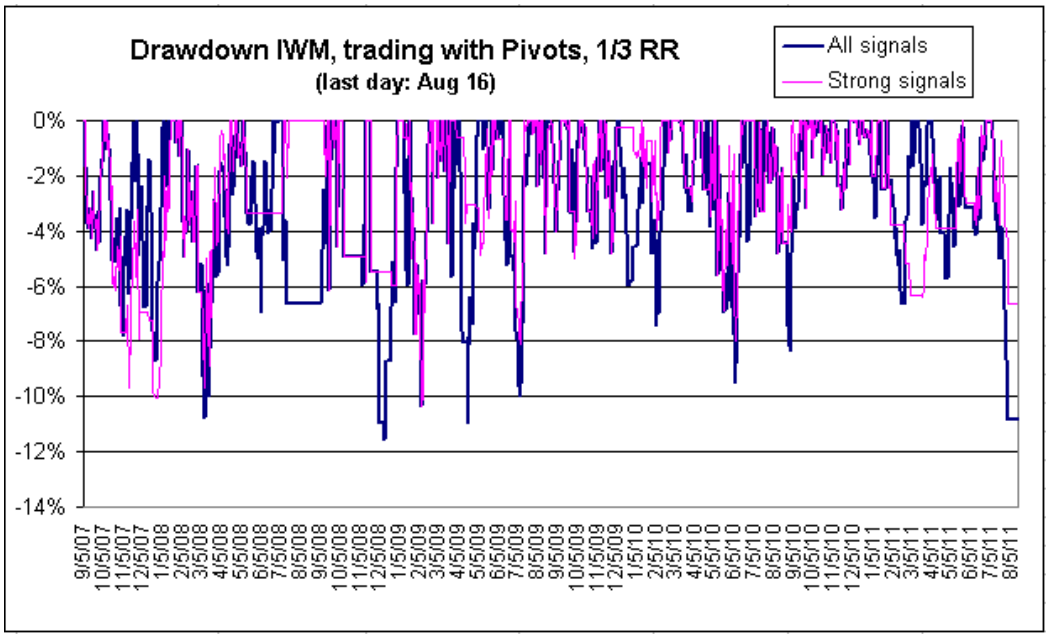
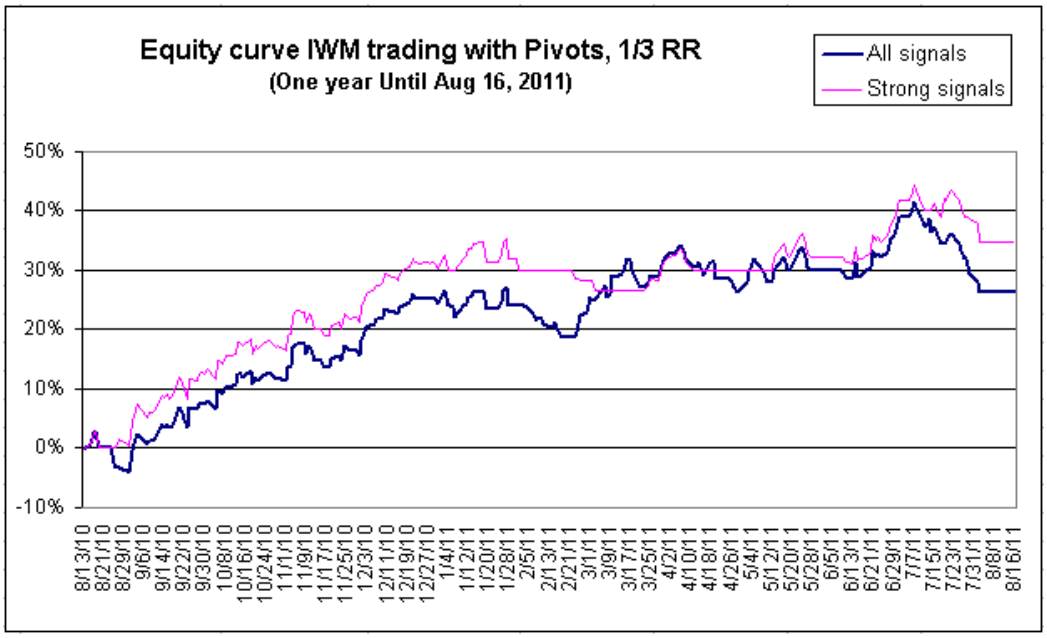


Figure 3: New Robot rules

Below are three figures that show lower drawdowns in general, but an equity curve that stays almost identical.







Disclaimer

Signals are provided as general information and are not investment recommendations. You are responsible for your own investment decisions. Past performance does not guarantee future performance. Opinions are based on historical research and data believed reliable, there is not guarantee results will be profitable. I am not responsible for errors or omissions. I may invest in the vehicles mentioned above.