

# **STOP LOSS AND POSITION SIZE**

By Daryl Guppy

**THIS FREE SPREADSHEET DOWNLOAD IS AVAILABLE TO SUBSCRIBERS ONLY**

Setting a stop loss exit has two aspects. The first is the financial aspect. The second is a chart based aspect. The objective of a good stop loss is to match the financial requirements with the chart based requirements. When these are achieved it makes for a safe trade because the price action trigger is related to a logical point on the chart.

We start with the financial aspect. For the purposes of the newsletter sample portfolio we always work with a nominal \$100,000 of trading capital. We always work with the 2% rule which says that the most we can put at actual risk on any single trade is \$2,000. This means that if the price falls after we have bought the stock, we need to get out if the loss is equal to \$2,000.

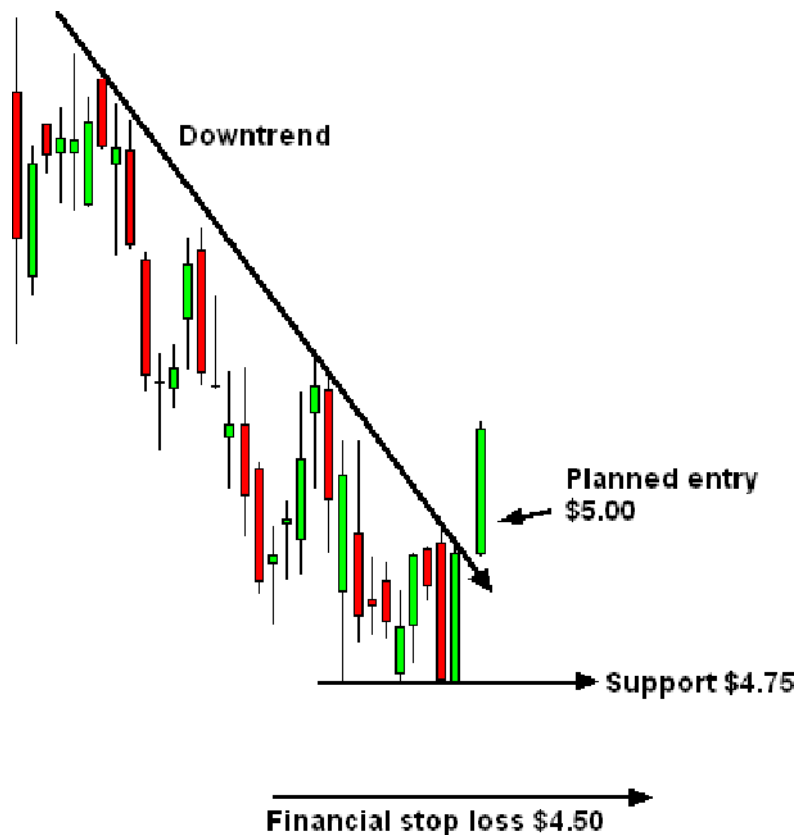
<b>Financial stop loss</b>	
Equity name	<b>Test 1</b>
Number of shares	<b>4,000</b>
Purchase price	<b>5.000</b>
Net cost	20,000.00
Av Brokerage	0.00
Full cost	<b>20,000.00</b>
<b>RISK PARAMETERS</b>	
Equity risk @ 2%	2,000.00
Risk on this trade	<b>2,000.00</b>
Stop loss exit price based on purchase price	<b>4.500</b>

Stop loss value

The obvious way to calculate the stop loss exit price is to simply combine our permitted loss value - \$2,000 - with our proposed entry point. This provides a simple solution to the financial aspect of setting the stop loss. This is straightforward spreadsheet work.

In this example we propose to make an entry at \$5.00. For newsletter proposes we try to keep each trade as close to \$20,000 as possible. This is a reasonable trade size. By keeping all trade around the same size it is easier to compare results. This sets the stop loss at \$4.50. If we enter at \$5.00 then we lose \$2,000 if the price falls to \$4.50. This is our exit signal.

If setting a stop loss was this easy then we would all have more trading success. The chart display highlights the problems with using a purely financial stop loss condition. Our financial stop loss at \$4.50 hangs in mid air. It bears no relationship at all with what has been happening with price activity.



The chart shows strong support at \$4.75. This is where we would expect prices to pause during any market fall. This pause point gives us the opportunity to get out. These support levels are created when many traders come in to buy at this price. For us, a drop below this support level suggests that the trend we hoped to trade is not going to eventuate. A fall below this \$4.75 level is our exit signal.

This chart information provides the detail required to create a chart based stop loss conditions. We plug the figures into the spreadsheet and arrive at the maximum theoretical position size. The figures we need are the entry price - \$5.00 - and the planned stop loss exit price \$4.75. When these are entered into the spreadsheet we get the maximum theoretical position size.

This means we can let prices fall to \$4.75 and our losses will not exceed \$2,000. This matches the financial risk control requirements with the logical chart based requirements. Unfortunately it still presents a significant problem. This theoretical trade is not a trade we can take.

<b>Chart stop loss</b>	
Equity name	<b>test 2</b>
Maximum # of shares	<b>8,000.0</b>
Purchase price	<b>5.000</b>
Net cost	40,000.00
Av Brokerage	0.00
Full cost	<b>40,000.00</b>
<b>RISK PARAMETERS</b>	
Equity risk @ 2%	2,000.00
Risk on this trade	<b>2,000.00</b>
Stop loss exit price based on full cost	<b>4.750</b>

As noted above, for tutorial purposes we keep all trades at around \$20,000. This means we do not want to spend \$40,000 on this trade no matter how good it looks. In real life we might not have \$40,000 available for the trade. This spreadsheet extract shown gives us the maximum theoretical amount we can spend on the trade.

<b>Position size too large</b>	
Equity name	<b>test 3</b>
Number of shares	<b>20,000</b>
Purchase price	<b>5.000</b>
Net cost	100,000.00
Av Brokerage	0.00
Full cost	<b>100,000.00</b>
<b>RISK PARAMETERS</b>	
Equity risk @ 2%	2,000.00
Risk on this trade	<b>2,000.00</b>
Stop loss exit price based on purchase price	<b>4.900</b>

Stop loss value

When we come to complete the trade we can either use this amount or make it smaller. We cannot make it larger. If we spend more than \$40,000 on the trade then the exit point rises above the logical stop loss point. In the spreadsheet extract we decide to spend \$100,000. The stop loss point now lifts to \$4.90. Prices can only fall to this level before we incur a \$2,000 loss. This stop loss is too tight. We have to get out before the chart based logical stop loss level is hit.

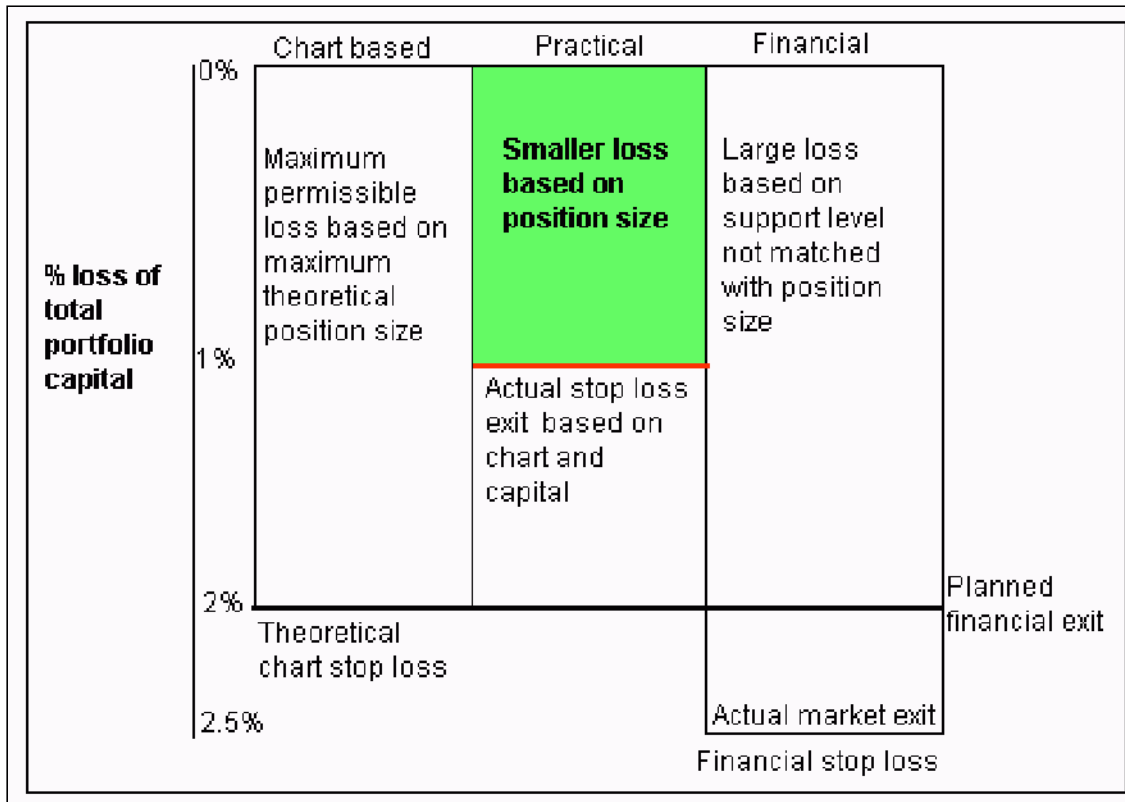
<b>Practical stop loss</b>	
Equity name	<b>test 4</b>
Maximum # of shares	<b>4,000</b>
Purchase price	<b>5.000</b>
Net cost	20,000.00
Av Brokerage	0.00
Full cost	<b>20,000.00</b>
<b>RISK PARAMETERS</b>	
Equity risk @ 2%	2,000.00
Risk on this trade	<b>\$1,000.00</b>
Stop loss exit price based on full cost	<b>4.500</b>

Amount saved when compared to maximum equity risk

To get the best trading solution we need to bring together the logical stop loss point - \$4.75 - and the amount we are prepared to trade - \$20,000 - and combine this with the amount we are prepared to lose if we are wrong -\$2,000. This combination gives us the best possible solution.

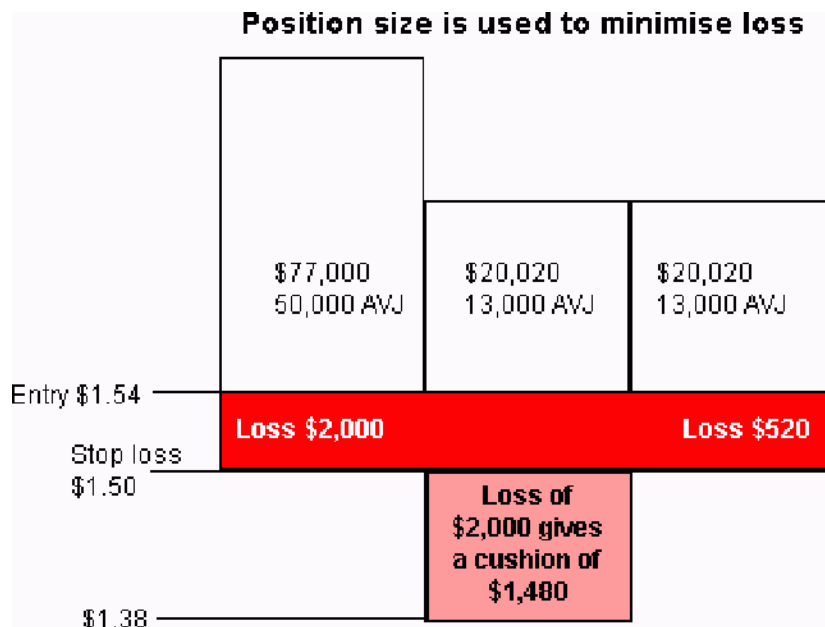
Now we buy 4,000 shares at \$5.00 and spend our preferred \$20,000. With this combination the stop loss point is lowered to \$4.50. This means prices can drop to this level before we lose \$2,000. This makes it a much safer trade because the risk in the trade is reduced.

The chart based stop loss level at \$4.75 is still the important figure. If prices fall below this then we get out of the trade. If we exit at \$4.75 then the total loss in this trade is now just \$1,000. Instead of losing 2% of our trading capital, the conditions of this trade mean we lose just 1%.



The results of these different approaches are shown in the diagram. If we use just

a financial calculation then the stop loss level rarely coincides with a logical point on the chart. If we use just a chart based calculation then the danger is that it will require more capital than we have, or more than we are prepared to commit to the trade.



The practical trading solution brings the size of the trade – the amount spent – and the logical stop loss point together so that the actual risk is never greater than 2% of trading capital.