

## *Using Partial Exits and Position Sizing*

One of the most difficult questions facing traders is how and when to exit a winning trade. Exiting losing trades can be more straightforward because most traders understand the importance of preserving capital and cutting losses short, however, the more difficult exits are those where there is a large amount of open trade profit. To exit early would risk missing a bigger gain, to exit late means giving back a large percentage of your current profit. Both of these options seem to be equally painful in the minds of traders.

One alternative to this dilemma is to have the best of both worlds, specifically, using partial exits to scale out of winning trades. This approach allows you to lock in profits while simultaneously letting profits run. You may think “yes, but that means multiple contracts and possibly more risk”, however, in this article we will show you how trading multiple contracts with partial exits and proper position sizing can potentially reduce risk and improve performance ratios.

We will start out with a simple long-term trend following system and watch how the performance ratios rise step-by-step as we first add partial exits and then position sizing. The test was conducted on a 21 market portfolio over 10 years of data using \$75 slippage and commissions. All markets were tested with identical rules and parameters and a starting balance of \$100,000 was assumed.

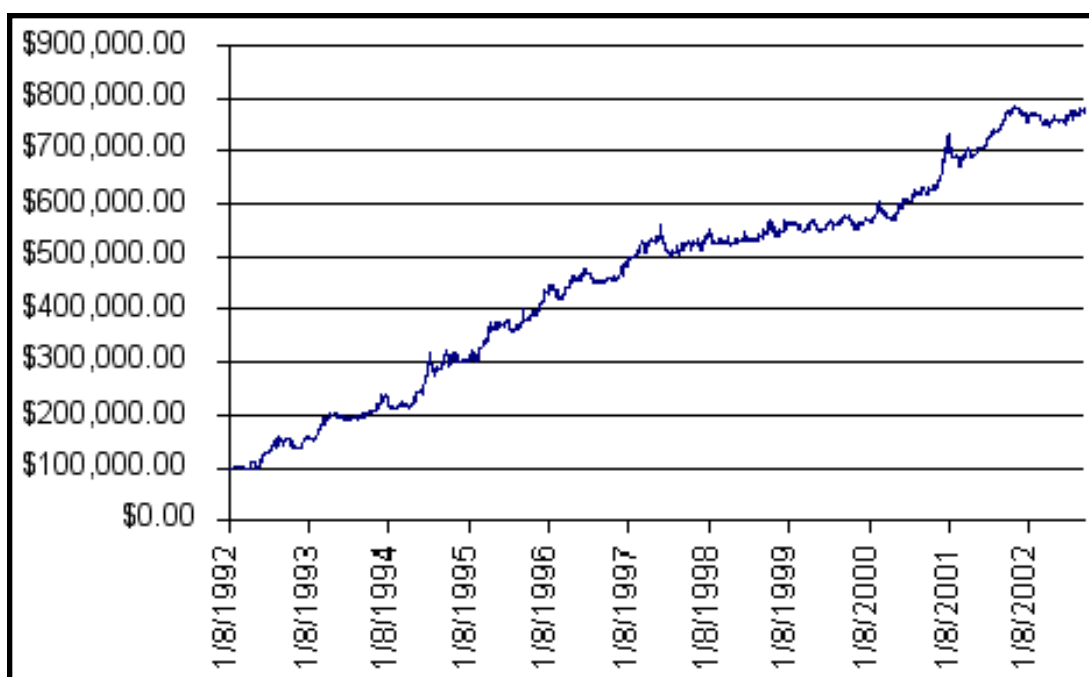
Figure 1 shows the single contract system performance *without* partial exits and no position sizing.

**Figure 1**

Net profit: \$673,307  
Percentage winners: 36.1%

Max \$ Drawdown: \$60,504  
Avg. \$Win to Avg. \$Loss: 4.44

Net Profit/Max Drawdown Ratio: 11.12



If we didn't change any of the exits and just simply traded 2 contracts instead of one then you would just multiple the profits and losses times 2 and end up with the same performance ratio. However, in the next test we are going to add a second contract to every trade but we will use partial exits to scale out of winning trades. What you will see is an amazing phenomenon; instead of a one-to-one increase in profits and drawdowns net profits increased by \$470,671 yet the drawdown only increased by \$8,511!

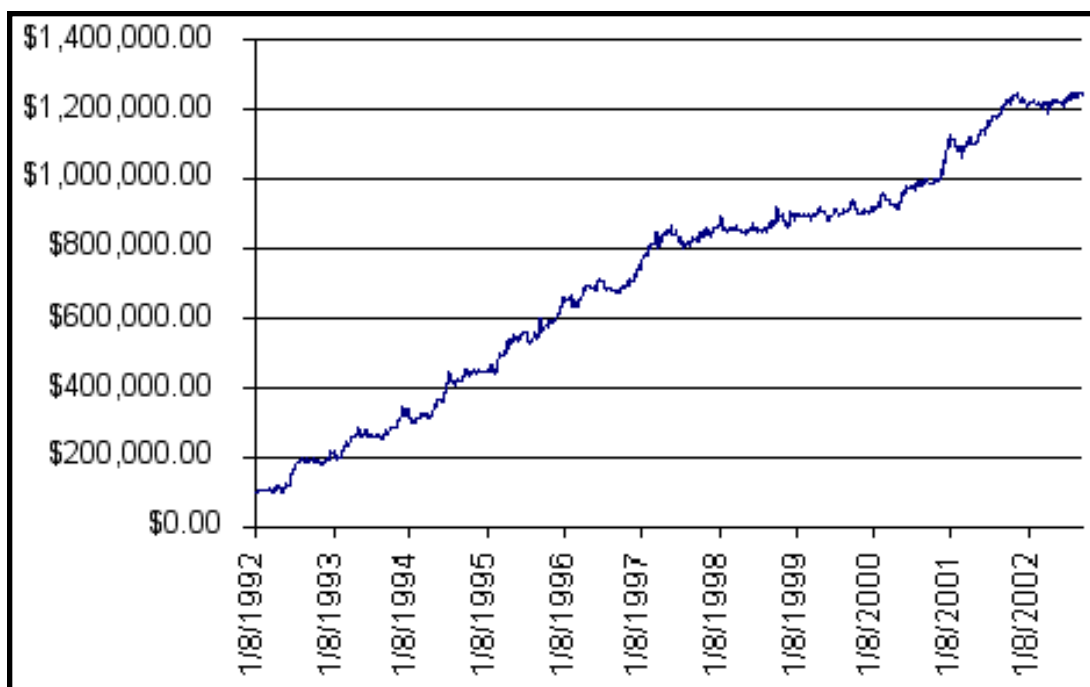
Figure 2 shows the same system trading two contracts with partial exits.

**Figure 2**

Net profit: \$1,143,978  
Percentage winners: 38%

Max \$ Drawdown: \$69,015  
Avg. \$Win to Avg. \$Loss: 3.75

Net Profit/Max Drawdown Ratio: 16.57



The next step is to normalize the markets. What this means is that for every market we will trade more or less contracts depending on that market's "weight". We will use a \$3000 benchmark to weight the markets with. Therefore, if a trade has an initial risk of \$3,000 it will get one contract. If it has an initial risk of \$1,500 it will get 2 contracts etc. Furthermore, if the initial risk is above \$3000 it will get NO contracts.

Figure 3 shows the same system trading a variable number of contracts based on a \$3000 weighting with partial exits.

Figure 3

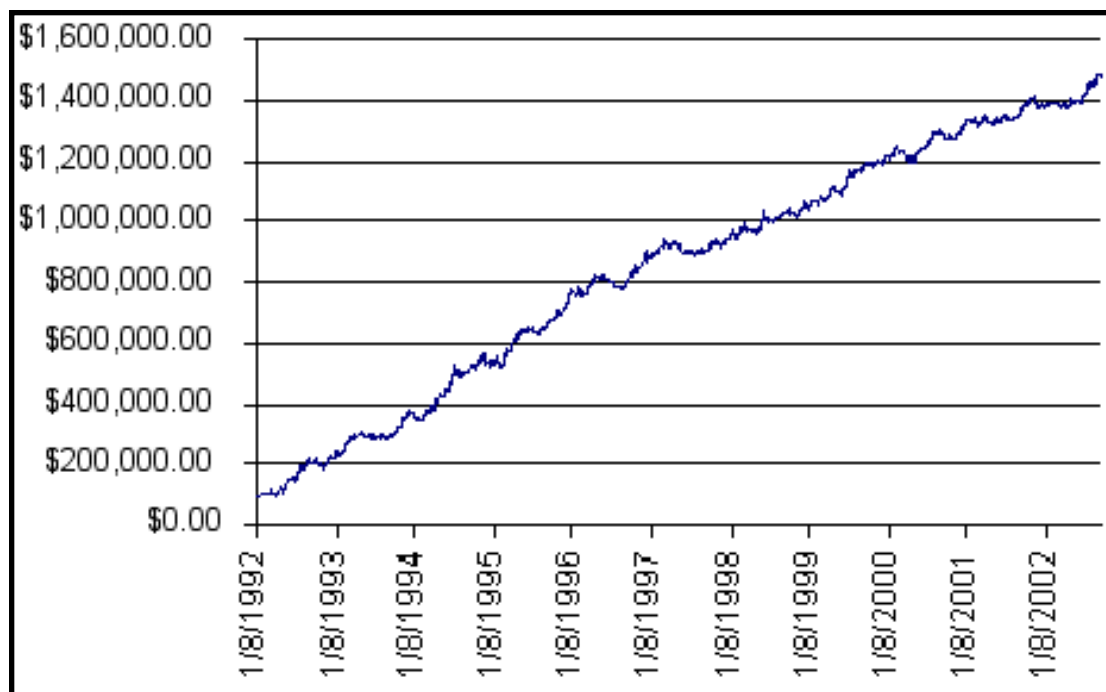
Net profit: \$1,377,451

Percentage winners: 37.3%

Max \$ Drawdown: \$51,445

Avg. \$Win to Avg. \$Loss: 4.35

Net Profit/Max Drawdown Ratio: 26.77



Here you can see the amazing jump in performance. Profits are over 100% higher than in the single contract test AND the maximum drawdown actually decreased! In addition, the equity curve is much smoother.

In our final test we will use Trading Recipes software to compound growth. We will show a \$100,000 account risking 2% of equity per trade. One of the reasons for showing this is to dispel some commonly held beliefs about single contract performances. For example, the above example shows a maximum drawdown of \$51,445. Therefore, some trader's might think that a \$100,000 account experienced as much as a 51.44% drawdown. However, this is not the case. As you will see, the maximum drawdown when risking 2% of equity per trade was only 26.6% not 51.4%.

Also, just showing the ratio of dollar gains divided by *dollar* drawdowns is very limited because most often, just simply going back further in time will raise that ratio. For this reason (and many others) its better to look at the *percentage* gains vs. the *percentage* drawdowns.

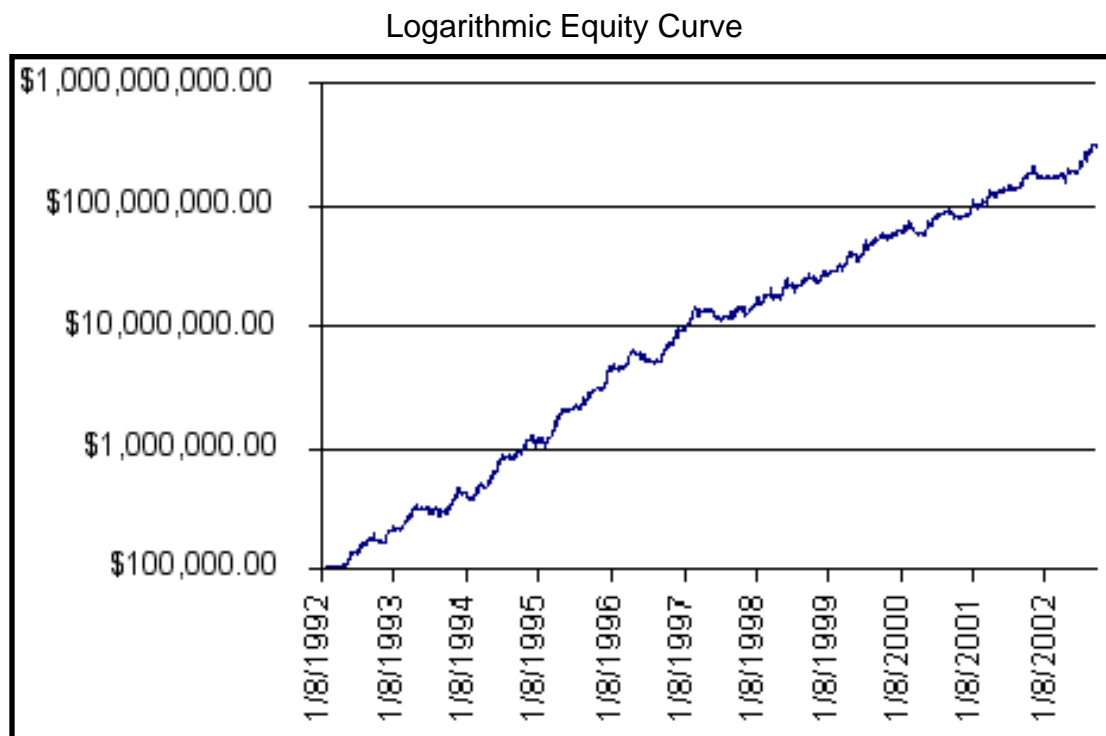
Figure 4 shows the same system risking 2% of equity per trade with partial exits and a \$100,000 starting account.

**Figure 4**

Average Annual Return: 111.4%  
Percentage winners: 37.7%

Max Drawdown: 26.6%  
Avg. \$Win to Avg. \$Loss: 3.28

Average Annual % Return / Max % Drawdown: 4.19



## Summary

What these tests show is that single contract performance results can go through a complete metamorphosis when partial exits and position sizing are added. We started out with a single contract system that made \$673,307 with a \$60,504 drawdown. By adding partial exits and equal weighting we turned it into a system that made \$1,377,451 with a \$51,445 drawdown. Furthermore, we showed you how only risking a percentage of equity per trade and compounding growth could give you a completely different perspective of the percentage returns and drawdowns.

Hopefully, this will help to stimulate your thinking about what's possible when you add partial exits, equal weighting and position sizing to your trading approach. It's important to note that not all systems have performance increases when adding the above strategies. In fact, some of them actually see a large performance decrease. Therefore, it's important not to make any assumptions but rather to see the actual test results before applying these concepts.

HYPOTHETICAL PERFORMANCE RESULTS HAVE MANY INHERENT LIMITATIONS. NO REPRESENTATION IS BEING MADE THAT ANY ACCOUNT WILL OR IS LIKELY TO ACHIEVE PROFITS OR LOSSES SIMILAR TO THOSE SHOWN. THERE IS A RISK OF LOSS INVOLVED IN TRADING FUTURES.