# Playing a Game You Can Win

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A look at the 3 things that you can change to make sure you are trading a system that is capable of making money

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Imagine a simple coin-tossing game where you win whatever you stake if heads comes up, lose what you stake if tails comes up, and you are charged 1% of your stake each turn to play. Can you win money at this game? If you are familiar with the concept of expectancy, then you will probably answer 'No' since over many turns the amount won will be equal to the amount lost (assuming the coin is a fair one) and after factoring in the 1% cost of playing you will lose money overall. In fact, there is a way to win this game, and that is to understand that the longer you play, the more you will lose, so the optimum strategy is to bet everything you have on just one toss of the coin; just like Ashley Revell did when he sold everything he owned, took the $135,300 to Las Vegas, and bet it all on 'Red' on one spin of the roulette wheel. Mr. Revell was fortunate and he won, but I am not recommending that you bet everything you have on one trade!

Obviously risking everything on one trade is not a useful strategy since we want a game we can play for long periods of time to generate a consistent income. So how can we change the game so that we can win? There are three aspects to the game which can be adjusted to increase our chances of winning consistently:

- We can tip the chance of a winner in our favor from 50/50
- We can increase the size of the payout from 1:1
- We can reduce the cost of playing the game

Tipping the chances of a winner is not possible in a fair coin toss game, but it is possible in trading. There are two ways to approach this: identify conditions that are more favorable to your winners and include them in your system definition, or identify circumstances where a loser is more likely, and skip those trades. For example, if you notice that most of your winners are entered on days where the overall market has moved in the same direction as your trade, then only enter trades when the overall market is moving in the correct direction. This means that your trade is in the same direction of the overall market, rather than against it. Another example might be that trades that are entered just before major news announcements, like earnings calls, often get stopped out as losers due to increased volatility, so you should skip those trades.

There may be many patterns of winners and losers that you can identify for your own systems and careful study of past trades is definitely worthwhile. Note that we do not want to increase our win percentage too significantly (i.e. to greater than 60%) since this would indicate that we have 'curve-fitted' our system to historical results that are unlikely to continue into the future. It is also important to note that for some types of trading (i.e. long-term trend following strategies) it may not be possible to have a win percentage that is greater than 50% (and it may be much lower) and that is where the second aspect of improving your system comes into play: the average size of winners versus losers.

Increasing the size of the payout so that the winners win more on average than the losers lose depends on the way you handle your stops. Having large winners in relation to losers can make up for a low win percentage, and mean that you will still make money playing the game. One method is to have a trailing stop that moves up as a trade becomes a winner. If you have fixed stops for losing trades that limit losses, but trailing stops for winning ones that allow winners to grow, then you are increasing your chances of your average winner being larger than your average loser. Generally it is better to be strict on losers by having tighter stops that keep losses to a minimum and generous with winners by having stops that allow profits to grow. In any case you want to make losers small and winners large, so never add to a losing trade – that would be doing the opposite of what you want to achieve.

Lastly, reducing the costs of trading is probably the simplest change you can make, and can mean the difference between winning and losing overall – especially for systems that have lower expectancy. There are many online brokers now that charge 1c per share for equity trades (and comparably low fees for other instrument types) and there is no reason why you should be paying more than this if you are trading electronically.

Every trader should do whatever they can to maximize the expectancy of their trading system or method by considering each of the 3 aspects just described. If we do some, or all, of these things then the amount we win now becomes a factor of how much we stake, and how often we play because we have created a true ‘edge’ where we know that the system we are trading should make money (if traded accurately). Calculating the expectancy of your trading system or method tells you whether you are playing a game you can win, and is a very important piece of information that every trader should know before they risk real money. If the game is rigged against you because your trading methods lose money regardless of how accurately you implement them, how can you ever be a successful trader?

PMKing Trading has published a series of E-books that outline what we consider to be the most important aspects of trading. More information can be found at www.pmkingtrading.com.

**Paul King is owner and head trader of PMKing Trading LLC, a Vermont-based proprietary trading company founded in May 2002. Paul's background is in Computer Information Systems and Automated Software Engineering. He left the UK in 1997 to provide business analysis and consulting services to Wall Street companies, and after 6 years working in Manhattan escaped to the mountains of Vermont after he became interested in automated trading systems development.**

**After 18 months of research, development, and testing, PMKing Trading's initial suite of trading systems have now been in successful full-size trading for 2 years. PMKing Trading has recently registered as an investment advisor, and Paul has also published a series of eBooks that outline what he considers to be the most important aspects of trading.**

**Paul's philosophy on trading can be summed up by an old Chinese proverb: 'Those who say it cannot be done should not interrupt the people doing it'. Paul can be contacted by email at public@pmkingtrading.com.**