Money Management

Money management is the single most important factor that will determine whether you become a successful trader.

Although you may think that the system or method is the most important, neither will give you long term results unless you understand the basics of money management.

A bad trading method still might stand a chance if good money management principles are applied but even a great method will fail if bad or no money management is used.

Remember the first rule of trading is to try and limit your loses not make money. The amount you risk on any particular trade is one of the few things you can control.

Traders are not gamblers; they are statisticians. You have to look at the markets like a scientist would. If you do X, will you get Y? You should measure and record everything.

Before you trade it is very important that you have some working knowledge of probability in order to maximize your trading technique.

Regardless of the method you use to trade, you need to have good money management. It is the single most important part of your trading plan. Nothing works without it.

Before I get started on exact money management principles, I want to introduce you to some basic probability.

Every time you place a trade you are calculating your probability of success or failure. You wouldn't enter a trade if you didn't think you would make money. You make a decision on the assumption that a particular trade (event) has a high probability of success.

The question is how much of an edge do you have on that event?

If you have an edge, then in theory you will eventually make money or if you don't have an edge but the winning events far surpass the losing events, then you will make money.

Other factors have to be taken into consideration too, such as slippage and spread.

The first prize of course is to have an edge and for your wins to greatly surpass your losses.

The first point I want to make about your trading is this. Even if you have an edge you will at some time go through an aberrant run.

Let's say you have a method of trading with a 60% probability of success. Does this mean that for every 100 trades you will win 6 out of 10?

Not necessarily! You see, wins tend to be skewed. They are skewed in two ways. First, there will tend to be only a few really big winners. That is to say, if you made 500 points you might find that you made 100 points in one trade and 200 in another trade and the rest were all made up of 30 or 50 points.

The second way they are skewed is that you might find if you made a 100 trades and expected to win 60 of those trades - what 60 trades would you win?

The answer is that there is no way of knowing. How would you feel if the first 40 trades you made were all losses? Most traders would assume that the method or system didn't work and call it a day.

If you don't think that is possible, consider this. Imagine you have a coin and you wanted to try and predict how many times that coin would land on heads.

You decide to toss the coin in the air. It can only come down heads or tails. You know that these are the only two choices or probabilities. If you toss the coin ten times, these are all the possible results:

10 heads and 0 tails
9 heads and 1 tail
8 heads and 2 tails
7 heads and 3 tails
6 heads and 4 tails
5 heads and 5 tails
4 heads and 6 tails
3 heads and 7 tails
2 heads and 8 tails
1 head and 9 tails
0 heads and 10 tails

Because the coin doesn't have a memory it doesn't remember that it landed, e.g. 7 heads in a row or 7 tails in a row – so the chances are always 50/50. This is the law of independent trial.

The next time you have a beer with your buddy ask him what he thinks the odds are of tails coming up if you just tossed a coin in the air 10 times and every time it came down heads?

The point of this exercise is to make you think about probability. If you throw the coin in the air often enough it would eventually even out to 50/50. But if that were your trading account, would you still have enough money left in the account to see you through the bad runs?

Bad runs can and will happen to you at some stage and there is no way of knowing when.

Dependent events

Trading is much more like BlackJack (casino card game). If you start with, for example, 52 cards and the king of spades is dealt, what are the chances of that card coming out again on the same deck?

There is no chance. There are only 4 kings in each deck of cards. If you take out the king of spades, there is zero probability of the king of spades coming up again in the same deck of cards, as there is only one, and it has just been taken out.

This is actually the basis of card counting. Card counting is the process whereby each card in the deck is assigned a value and the card counter counts that assigned value as it is dealt. When the count is in the counter's favor he will bet more heavily.

Through the process of counting cards a card counter can gain an advantage over the casino. This is why in certain countries a casino will ban a card counter once identified.

BlackJack obeys the laws of dependent events. If you have the mental capabilities, you can beat BlackJack. On the other hand, because roulette obeys the laws of independent events you will never beat it. It is a mathematical impossibility to beat any game that obeys the law of independent trial (events).

So what's all this got to do with trading? Well, everything if you think about it. If you believe in the random walk theory, you are getting very close to an independent event and if you believed in the Dow Theory, then you would be close to dependent events.

Trading and Probability

As traders, we are attempting to make only high probability trades. In other words, we only want to trade when we believe the odds are in our favor. One way we attempt to find opportunities in our favor is through technical analysis.

Why You Should Never Double Up After Each Losing Trade

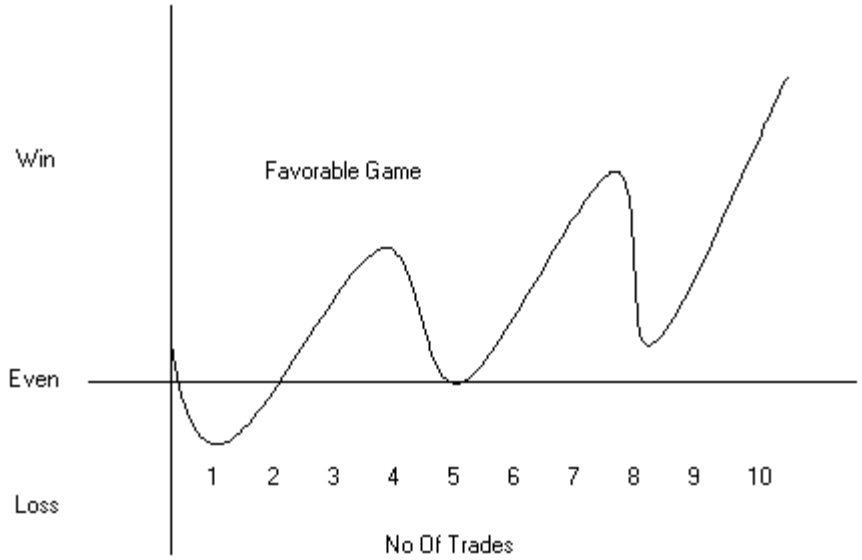
Doubling Up After Each Loss

First Trade	$100
Second Trade	$200
Third Trade	$400
Fourth Trade	$800
Fifth Trade	$1,600
Sixth Trade	$3,200
Seventh Trade	$6,400
Eighth Trade	$12,800
Ninth Trade	$25,600
Tenth Trade	$ 51,200
Total Lost	$102,300

Well, as you can see from the example above, if you doubled your position after each losing trade you would need a staggering $102,300 in your account just to cover your losses.

You might ask how likely is that to happen? And that, my friend, was the point of the previous few pages. Just think back to the example with the coins. An aberrant negative run can and **will happen**.

This is why I do not recommend doubling up after each loss. If you trade in a disciplined systematic manner, when your aberrant run does occur you will still be in the game at the end of the run.



Ideal situation

No Trades	**# Wins**	**# Losses**	**Total Wins**
2	1	1	1
4	3	1	3
6	4	2	4
8	6	2	6
Total			14

In the above example we made 14 out of 20 winning trades or 70%

Actual

No Trades	# Wins	# Losses	Total Wins
2	0	2	0
4	4	0	4
6	6	0	6
8	4	4	4
Total			14

The first example was a theoretical example and the second example is closer to what would happen when you are actually trading.

As you can see from the above, the actual may be different from the theoretical even though we land up at the same place.

Probability is a huge subject all on its own and we could go on for ever explaining the ins and outs.

It is important to realize that regardless of the system or method of trading, there will be occasions when you have losses or even a string of losses.

When these occur, it is important to have faith in your trading plan and not to try and double up to catch up.

Finally, as you can see from the above examples, any trading system will go through times when it has more losses than wins.

This is where money management comes into play.

Drawdown

Drawdown is a dirty word in trading but every trader will experience some drawdown. It is simply unavoidable.

Imagine that you start your trading account with $10,000 and after a few trades you lose $2,000. Your drawdown would be 20%.

Now let's say you make more trades and gain $4,000 which brings you to $12,000 ($8,000 + $4,000 = $12,000). After this, on the next trade you lose $2000. You're draw down would be 16.7% ($2,000/$12,000). The $12,000 was your equity peak - as that was the highest point in the period we looked at.

Maximum Drawdown

Maximum drawdown is the lowest point your account reached between peaks.

If you started your account with $10,000 and the lowest amount you had in your account over a six-month period was $5000 then you had a 50% drawdown.

You would need to make $5,000 from the lowest point in order to get back to even. This is an important point because even though you lost 50% from your high of $10,000, you would need to make 100% on the $5,000 to get back to even.

Measuring Drawdown Recovery

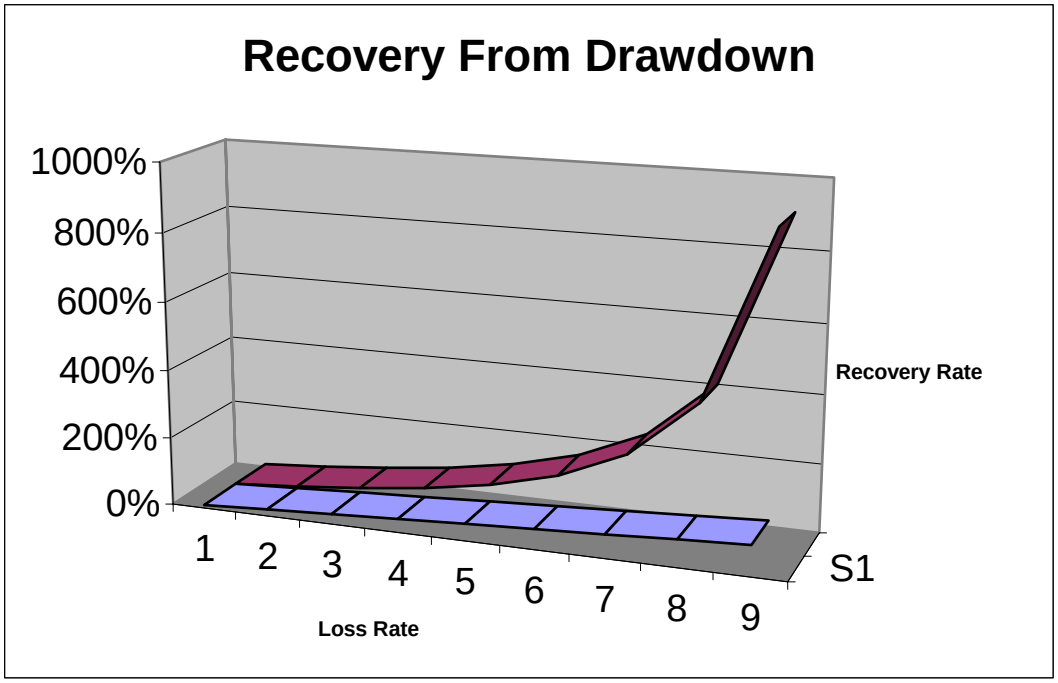
Drawdown recovery can confuse many traders. If a trader loses 20% of his account, he thinks he needs to make 20% in order to get back to even.

This is, in fact, not true. If you started with $10,000 and lost $2,000 (20%) you would need to make 25% in order to get back to even. The difference between $8,000 and $10,000 is $2,000. If you calculate the $2,000 as a percentage of $8,000 (not the original $10,000) it works out to 25%.

Loss Of Capital As A %	% Required To get Back to Break Even
10%	11.11%
20%	25%
30%	42.86%
40%	66.67%
50%	100%
60%	150%
70%	233%
80%	400%
90%	900%
100%	Blow Out/Broke

You can clearly see what's happening here. As your drawdown increases the amount you need to make it back increases faster.

I cannot emphasize this enough! You must be aware of risk. Understanding how basic probability and money management work is as important, if not more important, than any trading system.



This is the main reason I strongly advise new traders to use stop losses. If you use a stop then you will be able to define your risk.

If, for example, you decided to risk no more than 3% in any one trade, then the chances of going broke before you destroy your bankroll are minimal.

Trade No#	Equity	3% Of Equity	Equity	20% Of Equity
1	10,000	300	10,000	2,000
2	9,700	291	8,000	1,600
3	9,409	282	6,400	1,280
4	9,127	274	5,120	1,024
5	8,853	266		
6	8,587	258		
7	8,330	250		
8	8,080	242		
9	7,837	235		
10	7,602	228		
11	7,374	221		
12	7,153	215		
13	6,938	208		
14	6,730	202		
15	6,528	196		
16	6,333	190		
17	6,143	184		
18	5,958	179		
19	5,780	173		
20	5,606	168		
21	5,438	163		
22	5,275	158		
23	5,117	153		

As you can see from the table above, if you risked 20% on each trade and had 4 consecutive losses in a row, your drawdown would be almost 50%. If, on the other hand, you only risked 3% on each trade you would need 23 consecutive losses to get to the same 50% drawdown.

If you think 3% is not enough to risk on one trade, consider this. I have never met a trader who has been in this game for any extended period of time that does not have some kind of stringent money management principals.

In fact, the majority of traders who have been trading for a prolonged period would argue that 3% is too much. They would feel much more comfortable only risking 1%.

I also want you to note that if you are trading more than one market or have more than one trade on at any given time, than the total amount you are at risk should be no more then 3%.

Let's say you are following three markets and have one trade on in each market. You should add up the total amount that you are at risk if all three trades lost.

For example, if you had a starting account of $10,000 and you had three trades on, each with a $300 stop loss, then your risk is actually 9%. As each of your trades has the potential to lose $300 the total amount at risk is $900 which is 9% not 3%.

Risk Reward Ratio

Risk reward ratio is simply the amount you risk as compared to the amount you expect to make.

If you have a stop in place which limits your risk to $1000 but when your trade is successful you expect to make $3000, then your risk to reward ratio is 3:1

10 Trades	*Loss*	*Win*
1	$1,000.00	
2		$3,000.00
3	$1,000.00	
4		$3,000.00
5	$1,000.00	
6		$3,000.00
7	$1,000.00	
8		$3,000.00
9	$1,000.00	
10		$3,000.00
Sub Total	$5,000.00	$15,000.00

From the table above you can see that if you only selected trades where you thought you had a 3:1 risk reward ratio, then even if you were right only 50% of the time you would still make a profit.

Summary

- The first objective in money management is to preserve your account. Risk as little as you can.
- In an ideal situation you would only risk 1% of your capital but as this is unrealistic for most traders try and keep your risk to between 2-3%. If you can't do that, then risk as little as you can.
- Expect losses, they are part of trading.
- Try not to let your emotions get the better of you when you trade. A casino does not get upset when it loses a hand at BlackJack.
- No one knows the future and as such you have no way of knowing whether the trade you are about to make will be a winner or loser. The only thing you can control is risk.
- The most important part of money management is knowing that the less you risk of your account the more trades you can make before running out of money. You will go through bad patches and you need the ability to sustain these patches by exercising good money management principals.

Good Trading
Mark McRae
www.traderssecretcode.com